

# Service Manual

AUTOMOTIVE CONSUMER ELECTRONICS

CQ-MRX777EW



## High-Power CD/MD Player/Receiver with Changer Control



### Specifications\*

#### General

|                            |  |
|----------------------------|--|
| Power supply               | : 12V DC (11V-16V)<br>Test Voltage 14.4V,<br>Negative ground |
| Current consumption        | : 8.5 A<br>(at rated CD operation output)                    |
| Rated output               | : 16W × 4 channels<br>(1000Hz, 1%, 4Ω)                       |
| Maximum output             | : 40W × 4 channels   |
| Suitable speaker impedance | : 4Ω   |
| Audio input impedance      | : 10kΩ   |
| Audio input sensitivity    | : 200mV (AUX IN)   |
| PRE-OUT output voltage     | : 2V   |
| PRE-OUT output impedance   | : 600Ω   |

#### Tuners

##### FM Tuners

|                                  |                         |
|----------------------------------|-------------------------|
| Frequency range                  | : 87.5 - 108.0 MHz      |
| Useable sensitivity              | : 12 dBf                |
| Total harmonic distortion (mono) | : 0.3%                  |
| Weighted S/N ratio (mono)        | : 70 dB                 |
| Frequency response               | : 20 - 15,000Hz (±3 dB) |
| Stereo separation                | : 42 dB (1kHz)          |
| Image-rejection ratio            | : 75 dB                 |

##### AM Tuners

|                                |                   |
|--------------------------------|-------------------|
| Frequency range                | : 531 - 1,602 kHz |
| Useable sensitivity (S/N 20dB) | : 27 dB/μV        |
| Image-jamming ratio            | : 65 dB           |

#### MD Player

|                       |                           |
|-----------------------|---------------------------|
| Number of channel     | : 2 channels              |
| Quantization          | : 16-bit linear           |
| Frequency response    | : 5 - 20,000Hz (±1 dB)    |
| Signal to Noise ratio | : 90 dB (1kHz)            |
| Wow and flutter       | : Below measurable limits |

#### CD Player

|                    |                           |
|--------------------|---------------------------|
| Number of channel  | : 2 channels              |
| Quantization       | : 16-bit linear           |
| Frequency response | : 5 - 20,000Hz (±1 dB)    |
| Dynamic range      | : 90 dB (1kHz)            |
| Wow and flutter    | : Below measurable limits |

#### DSP

|                                |  |
|--------------------------------|--|
| Number of channel              | : 2 channels for input<br>4channels for output |
| Reverberation level adjustment | : 7 steps                                      |
| Equalizer center frequency     | : 80, 160, 320, 640, 1.6k, 4k, 10k (Hz)        |
| Equalizer range                | : -12 dB to +12 dB (13 step)                   |

**Dimensions\*\*** (W×H×D) : 178 (W) × 50 (H) × 160 (D) mm

**Weight\*\*** : 1.5 kg

\* Specifications and the design are subject to possible modification without notice due to improvements.

\*\* Dimensions and weight shown are approximate.

\*\*\* Above specifications comply with EIA standards.

# Panasonic

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## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.

Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the products dealt with in this service information by anyone else could result in serious injury or death.

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## FEATURES

- 1DIN Size Body with MD/CD Player, AM/FM Tuner, Power AMP (40W×4) and CD/MD Changer Control Function
- DSP Full-digital Sound Control Functions (HEQ, DRCII, SBC)
- 2 CD/MD Changer Control
- PRE Output Terminal with DDBC (Digital Dynamic Base Control) Function
- Detachable Face Plate Security
- AUX IN RCA Connector
- 5 × 7 dot LCD Display (Max 60 Characters)

## REPLACING THE FUSE

Be sure to use a fuse of the specified rating (10A) when replacing a blown fuse. Fuses with higher capacity ratings, use of any substitute, or connection without a fuse may result in a fire hazard or damage to the unit.

## MAINTENANCE

Your product is designed and manufactured to ensure a minimum of maintenance. Use a soft cloth for routine exterior cleaning. Never use benzene, thinner, or other solvent.

## RADIO AND CD/MD DECK ALIGNMENT

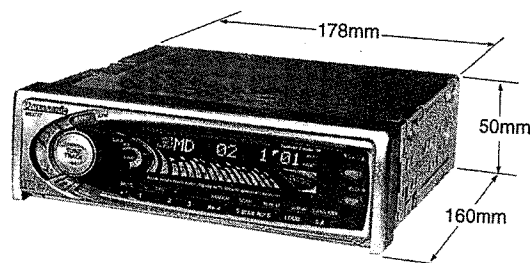
### RADIO BLOCK

Do not align the AM and FM package block is necessary, it will be supplied already aligned at the factory.

### CD/MD DECK BLOCK

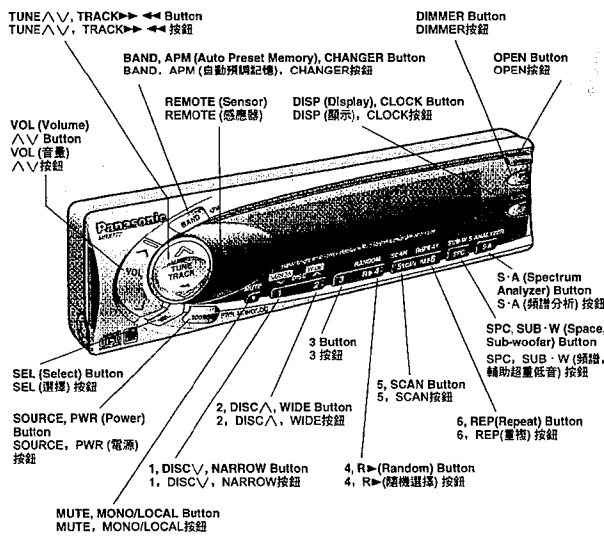
This model has no servo alignment points because microcomputer controls the servo circuit.

## DIMENSIONS

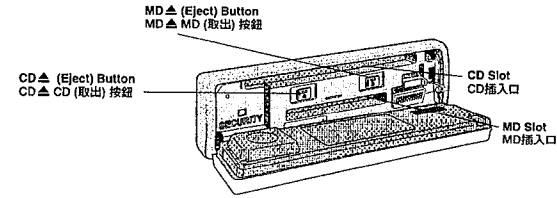


# Name of Controls/各控制器名稱

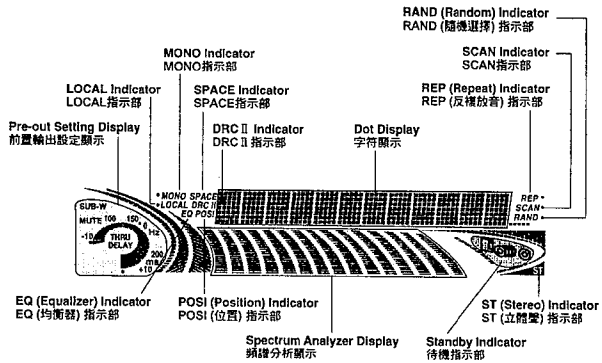
## Front Panel (Front)/正面面板 (正面)



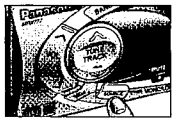
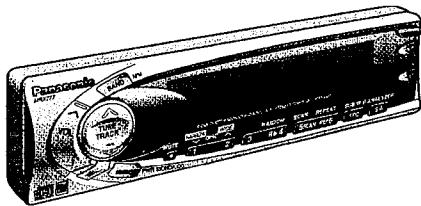
## Front Panel (Open)/正面面板 (開啟後)



## Display/顯示



## Operation: General

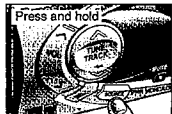


### Starting Operation / Power

Turn the key in the Ignition until the accessory indicator lights.  
Press **SOURCE(PWR)** to switch on the power.  
When you are using your unit for the first time, the tuner mode is activated and the DEMO mode pattern is displayed.  
\* Press **AM/FM, CD, MD, CH-C** when using a remote control. (Before pressing **CD** or **MD**, make sure that a disc is inside, and before pressing **CH-C**, make sure that a CD changer is connected correctly, and that the magazine is in the changer.)

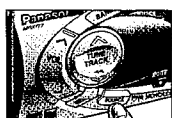
#### Note:

The display may remain unchanged when the above button is pressed. In such a case, press **S-A** to cancel the demonstration mode. (See page 36.)



### Power Off

Press and hold **SOURCE(PWR)** for more than 1 second to switch off the power.  
\* Press **OFF** when using a remote control.



### Switching Operation Mode

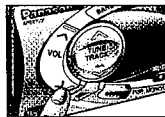
Press **SOURCE** to change the operation mode as follows.

TUNER  $\rightarrow$  CD  $\rightarrow$  MD  $\rightarrow$  (CD CHANGER)  $\rightarrow$  AUX

\* Press **AM/FM, CD, MD, CH-C, AUX IN** when using a remote control.

#### Note:

If no disc is inside, if the changer is not connected, or if the magazine is not in the changer, the source in question will not be selected.



### Volume

Press **VOL  $\Delta$**  or **VOL  $\nabla$**  to increase or decrease the volume.

0 to 40

VOLUME 32

#### Note:

An adjusted volume is saved in the memory for each sound source so that the volume changes from one sound source to another. (Intelligent volume function)

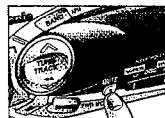


### Dimmer

Display brightness with the slide-marker lamps on or off can be set. (Default: DIMMER MID ... When side-maker lamp on  
DIMMER HIGH ... When side-maker lamp off)  
Press **DIMMER** to change to the dimmer level as follows.

DIMMER HIGH : Light grows brighter.  
DIMMER MID : Reversed downward  
DIMMER LOW : Reversed leftward

\* Press **DIMMER** when using a remote control.



### Mute

Sound can be temporarily muted.

Press **(MUTE)** to switch the mute on or off.  
MUTE OFF : Regular volume

MUTE ON : Mute (No sound)

The mute indicator blinks while the mute is on.

MUTE 100 150 0



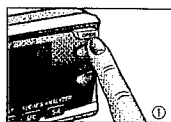
### Listening to External Device (AUX)

An external device should be connected to the AUX input on the back. Use the controls on the external device for its operation. For details, refer to the manual for that device.

Press **SOURCE** to change to AUX mode.

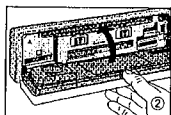
\* Press and hold **CD (AUX IN)** for more than 2 seconds when using a remote control.

## Operation: General (Continued)



### Open/Close the Front Panel

- ① Open the front panel  
Press OPEN on the front panel.



- ② Close the front panel  
Push the front panel up by hand to return it to regular position.

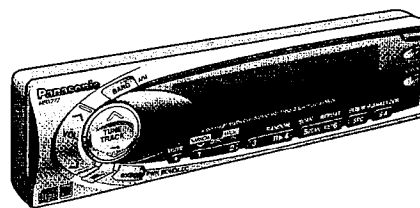
#### Caution:

- When the front panel is opened, do not force it down and do not put anything on it because these may result in damage to the unit.
- Do not adjust the front panel angle, or open/close the front panel, if a CD or MD has not been completely inserted into, or removed from the CD or MD slot.
- Do not insert an MD into the CD slot to prevent any trouble.

#### Note:

No operation can be performed, except for CD or MD eject, when the front panel is open.

## Radio Basics



### Tuner Mode

Press SOURCE to change to TUNER mode.

T TUNER T

- \* Press AM/FM when using a remote control.

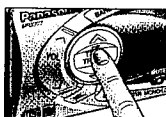


### Band

Press BAND to change the bands as follows.

FM1 → FM2 → FM3 → AM

- \* Press AM/FM when using a remote control.



### Manual Tuning

Press TUNE/ or TUNE/ to move to a higher or lower frequency. ST indicator lights when FM stereo broadcast is received.



### Seek Tuning

Press and hold TUNE/ or TUNE/ for more than 0.5 second, then release. The radio automatically stops at the next station. ST indicator lights when FM stereo broadcast is received.

## Radio Basics (Continued)

### Station Preset

FM1, FM2, FM3 and AM can save maximum 6 stations each in their preset station memories.

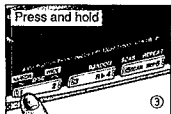


### Manual Station Preset

- ① Press BAND to select a desired band.  
\* Press AM/FM when using a remote control.
- ② Use manual or seek tuning to find a station that you would like to save into the memory.
- ③ Press and hold one of the preset buttons 1 to 6 until the display blinks.  
Repeat the process to set other stations for the FM1 to AM bands.

FM1-1 87.90

Preset number



#### Note:

You can change the memory setting by repeating the above procedure.



### Tuning in a Preset Station

Press any of the buttons 1 to 6 to tune in the preset station.



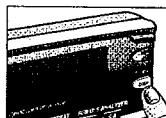
### Auto Station Preset

Select a band, press and hold BAND(APM) for more than 2 seconds. (APM: Auto Preset Memory)

- \* Press AM/FM for more than 2 seconds when using a remote control.
- The 6 strongest available stations will be automatically set in memory on preset buttons 1 to 6.
- Once set, the preset stations are sequentially scanned for 5 seconds each.
- Press the appropriate preset button for the station you would like to listen to.

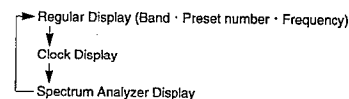
#### Caution:

For safety reasons, do not attempt to program while driving.



### Switching Display

Press DISP to change the display as follows.

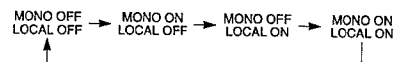


### MONO/LOCAL Selection

- Much interference is reduced during a weak FM stereo broadcasts when MONO is on. (Only for FM mode)
- Searching stops automatically at a strong signal only when LOCAL is on.

#### ① FM broadcasts

Press and hold (MONO/LOC) for more than 2 seconds to change the mode until reaching a desired mode, then release.



- \* Press and hold MUTE for more than 2 seconds when using a remote control.

#### ② AM broadcasts

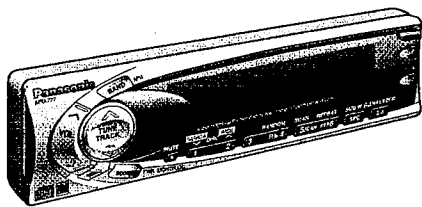
Press and hold (MONO/LOC) to change the LOCAL mode as follows.



- \* Press and hold MUTE for more than 2 seconds when using a remote control.



## Compact Disc Player Basics

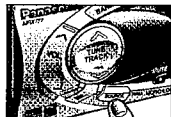


### CD Mode

With no disc inserted (Standby Indicator off)

- ① Press OPEN to open the front panel.
- ② Insert a disc with the label side up.
- ③ Close the front panel by hand.

The power is automatically switched on to start playing the CD.



With a disc inserted (Standby Indicator lights.)

- Press SOURCE to change to CD.  
Play starts from first track. The standby indicator blinks.  
\* Press CD when using a remote control.



CD Standby Indicator

#### Caution:

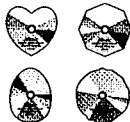
- Never use a protect film, stabilizer and the like that are commercially available as CD accessories because they may cause faults or failures.
- Close the control panel after the CD is completely pulled in.
- Do not insert an MD into the CD slot to prevent any trouble.

#### Note:

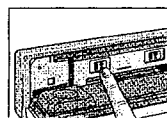
No operation can be performed except for CD eject when the front panel is open.

#### Note:

CDs of Special Shape  
Heart-shaped, octagonal, or other special-shaped  
CDs cannot be played.  
Do not use such CDs because they could cause  
technical trouble.



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### Stopping and Ejecting a Disc

Open the front panel. (See page 8.) Press **▲** to stop CD play, and the disc will be quietly ejected from the CD slot.

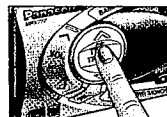
Power is automatically switched off after the CD is ejected.

#### Caution:

- When the front panel is open, do not force it down and do not put anything on it because these may result in damage to the unit.
- Do not adjust the front panel angle, or open/close the front panel, if a CD or MD has not been completely inserted into, or removed from the CD or MD slot.

#### Note:

CD will not be ejected when the car engine switch is in the OFF position, or when the control panel is closed or removed.



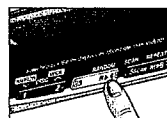
### Track Selection

- Press TRACK **▶▶** once to go to the next track.
- Press TRACK **◀◀** once to play from the beginning of the track you are listening to. Press twice to play the previous track.
- Press repeatedly to skip the desired number of tracks.



### Track Search

- Press and hold TRACK **◀◀** or TRACK **▶▶** for more than 0.5 second to activate reverse through or fast forward a track.
- Release TRACK **◀◀** or TRACK **▶▶** to resume the regular CD play.



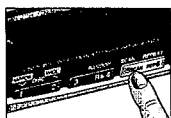
### Random Selection

- Press 4(RANDOM). A random selection of music is played from all available tracks.
- Press 4(RANDOM) again to cancel.



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## Compact Disc Player Basics (Continued)



### Track Scan

- Press 5(SCAN). The display will blink, and the first 10 seconds of each track on the disc will be played in sequence.
- Press 5(SCAN) again to cancel.
- Scan mode is also canceled when the CD has come to the beginning of the original program, which will then be played again.



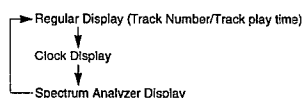
### Repeating a Track

- Press 6(REPEAT) to repeat the current selection.
- Press 6(REPEAT) again to cancel.
- The current selection will continue to repeat until you press 6(REPEAT) again.

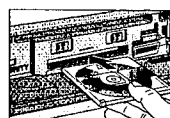
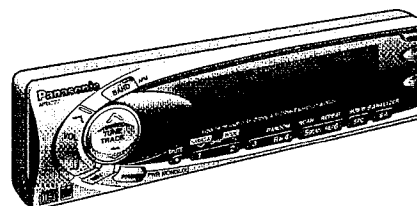


### Switching Display

Press DISP to select the bands as follows.



## Mini Disc Player Basics

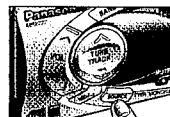


### MD Mode

With no disc inserted (Standby Indicator off)

- ① Press OPEN to open the front panel.
- ② Insert a disc with the label side up.
- ③ Close the front panel by hand.

The power is automatically switched on to start playing the MD.



With a disc inserted (Standby Indicator lights.)

- Press SOURCE to change to MD.  
Play starts from first track. The standby indicator blinks.  
\* Press MD when using a remote control.

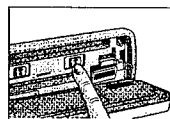


MD Standby Indicator

#### Caution:

- Close the control panel after the MD is completely pulled in.
- Do not insert an MD into the CD slot to prevent any trouble.

Note: No operation can be performed, except for MD eject, when the front panel is open.



### Stopping and Ejecting a Disc

Open the front panel. (See page 8.) Press **▲** to stop MD play, and the disc will be quietly ejected from the MD slot.

Power is automatically switched off after the MD is ejected.

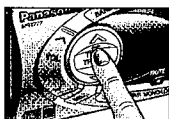
#### Caution:

- When the front panel is open, do not force it down and do not put anything on it because these may result in damage to the unit.
- Do not adjust the front panel angle, or open/close the front panel, if a CD or MD has not been completely inserted into, or removed from the CD or MD slot.

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## Mini Disc Player Basics (Continued)



### Track Selection

- Press **TRACK** once to go to the next track.
- Press **TRACK** once to play from the beginning of the track you are listening to. Press twice to play the previous track.
- Press repeatedly to skip the desired number of tracks.

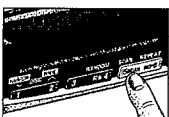


### Track Search

- Press and hold **TRACK** or **TRACK** for more than 0.5 second to activate reverse through or fast forward a track.
- Release **TRACK** or **TRACK** to resume the regular MD play.

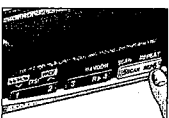
### Random Selection

- Press **4(RANDOM)**. A random selection of music is played from all available tracks.
- Press **4(RANDOM)** again to cancel.



### Track Scan

- Press **5(SCAN)**. The display will blink and the first 10 seconds of each track on the disc will be played in sequence.
- Press **5(SCAN)** again to cancel.
- Scan mode is also canceled when the MD has come to the beginning of the original program, which will then be played again.



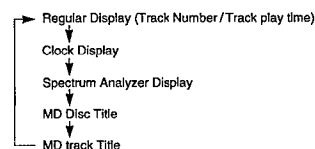
### Repeating a Track

- Press **6(REPEAT)** to repeat the current selection.
- Press **6(REPEAT)** again to cancel.



### Switching Display (MD Title Display)

Press **DISP** to change the display as follows.



Title Information that is recorded in an MD can be displayed with maximum 60 of alphanumeric figures.

### Anti-Shock Memory

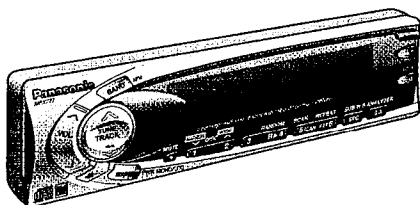
This function stores oncoming sound data while playing, thus preventing MD play from being interrupted due to vibration.

Memory storing time : 40 seconds

16

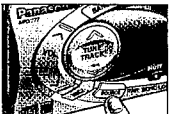
17

## CD Changer Basics



An optional CD changer (CX-DP801EN for example) is necessary.

When the magazine is inserted and the changer is connected, the standby indicator lights.



### To Start the CD Changer

- While CD Changer is connected, press **SOURCE** to Change to the CD Changer mode and playback starts automatically.
- \* Press **CH · C** when using a remote control.

#### Note:

- No changeover takes place if the changer is not connected or if the magazine is not in the changer.
- If there is no disc in the magazines, "NO DISC" appears on the display.
- When a disc (magazine) is inserted into the changer when power is off, power is switched on and the disc starts playing.

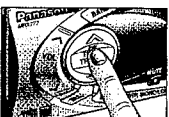


### Disc Selection

Press **1(√/DISC)** or **2(DISC/∧)** to change discs in descending or ascending order.

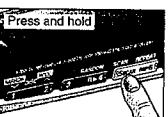
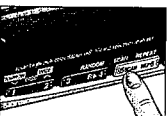
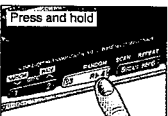
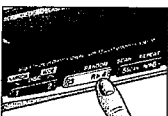
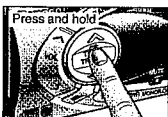
Then, the selected disc will start playing from the first track.

Disc Number      Track Number



### Track Selection

- Press **TRACK** once to go to the next track.
- Press **TRACK** once to play from the beginning of the current track. Press twice to play the previous track.
- Press repeatedly to skip the desired number of tracks.



### Track Search

- Press and hold **TRACK** or **TRACK** for more than 0.5 second to activate reverse through or fast forward a track.
- Release **TRACK** or **TRACK** to resume the regular CD play.

### Random Selection

#### Track Random Play

- Press **4(RANDOM)**. A random selection of music is played from all available tracks.
- Press **4(RANDOM)** again to cancel.
- The random indicator lights when Track Random is on.



#### Disc Random Play

- Press and hold **4(RANDOM)** for more than 2 seconds. A random selection of music is played from current disc selection.
- Press and hold **4(RANDOM)** for more than 2 seconds again to cancel.
- The random indicator blinks when Disc Random is on.



### Scanning

#### Track Scan

- Press **5(SCAN)**. The display blinks and the first 10 seconds of each track on the discs play in sequence.
- Press **5(SCAN)** again to cancel.
- Scan mode is also released when the disc has come to the program preceding the original program.
- The scan indicator lights when Track Scan is on.



#### Disc Scan

- Press and hold **5(SCAN)** for more than 2 seconds. The 1st track of all the discs in the magazine is played for 10 seconds each.
- Press and hold **5(SCAN)** again to cancel.
- Scan mode is also released when the disc has come to the program preceding the original program.
- The scan indicator lights when Disc Scan is on.



18

19

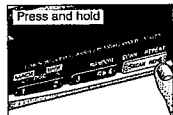
## CD Changer Basics (Continued)



### Repeat Play

#### Repeating a Track

- Press 6(REPEAT) to repeat the current selection.
- Press 6(REPEAT) again to cancel.
- The repeat indicator lights when Track Repeat is on.

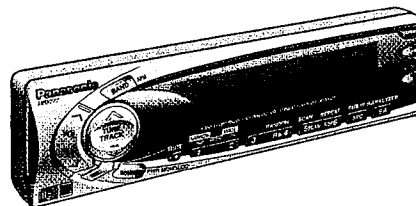


#### Repeating a Disc

- Press and hold 6(REPEAT) for more than 2 seconds to repeat the current selection.
- Press and hold 6(REPEAT) for more than 2 seconds again to cancel.
- The repeat indicator blinks when Disc Repeat is on.



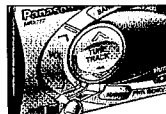
## Sound Controls



### Tone Quality Adjustment

Press SEL to change to tone quality as follows.

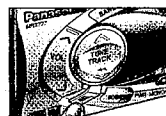
Regular mode → HUMAN EQ → GRAPHIC EQ → BAL/FAD  
 ↑  
 DRCII SELECT ← SUPER BASS ← POSITION SEL



**Note:**  
 When a setting mode is selected but no operation is made within 5 seconds, the display will return to the regular mode.

### Tone Quality Setting / HEQ (Human Equalizer)

- Unlike GEQ (graphic equalizer) which is for adjusting the tone quality of each frequency band, HEQ offers a revolutionary function which enables you to select a heavy, light, sharp, or soft tone as desired.
- Select your favorite tone, referring to the Human Equalizer Positioning Image diagram as follows.



① Press SEL to change to HEQ. The HEQ indicator blinks.

HUMAN EQ

EQ Indicator



## Sound Controls (Continued)



### ② Setting a Tone Quality

With the center fixed flat, any of the 49 equalizer patterns, arranged in vertical and horizontal directions, can be selected.

Press VOL/ to change to heavy bass sound.

Press VOL/ to change to light bass sound.

Press TRACK/ to change to sharp treble sound.

Press TRACK/ to change to soft treble sound.



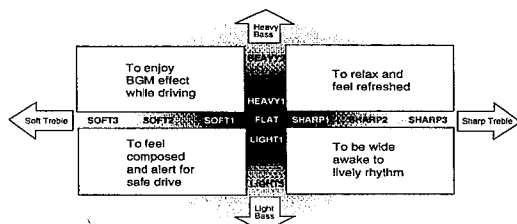
\* Press /, /, /, / when using a remote control.

A sound effect closer to the real sound can be enjoyed by setting Sound Field Effect as described on the next page after the tone quality setting.

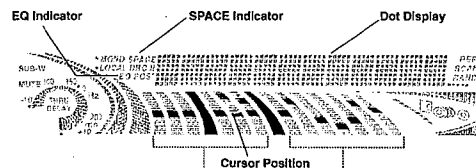
### ■ Human Equalizer Position Image

You can select a tone quality suiting with your feeling among 49 patterns. (Default: FLAT)

Center : Flat  
 Vertical axis : Heavy and light components of sound (mainly bass)  
 Horizontal axis : Sharp and soft components of sound (mainly treble)



### Human Equalizer Display

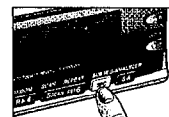


**Tone Quality (HEQ) Adjustment Table**  
 The cursor blinks at the set tone quality (current HEQ mode) position.

**Equalizer Characteristic Result Display**  
 The equalizer curve corresponding to the cursor position is displayed in the right half. (7 bands x ±10 dB) (Full display in case of GEQ)

### Sound Field Effect Setting / SPACE

Sound Field Effect can be set for each of the FM, AM, CD, MD, CH-C, and AUX modes.



Select "HUMAN EQ" for Sound Field Effect setting. (See page 21.)  
 Press SPC to change the Sound Field Effect as follows. (Default: SPACE OFF)

SPACE OFF → LIVE (HOUSE) → (CONCERT) HALL → JAZZ (CLUB)  
 ↑  
 CINEMA ← VOCAL ← DISCO ← STADIUM

\* Sound Field Effect can be set directly even if you do not select "HUMAN EQ".

When Sound Field Effect is set, the SPACE Indicator lights.

SPACE Indicator — SPACE

### Sound Field Setting (NARROW / WIDE)

The sound field range can be further adjusted in the set sound field. (Default: 0, Setting Range: -3 to 3 each)



Select "HUMAN EQ" for Sound Field Effect setting. (See page 21.)  
 Press SEL to change to HEQ.

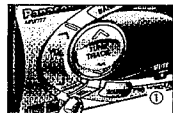
Press 1 (NARROW) or 2 (WIDE) to narrow or widen the sound field range.

**Example:** When HALL is selected for sound field setting,  
 NARROW ..... creates the atmosphere of a small hall.  
 WIDE ..... creates the atmosphere of a large hall.

## Sound Controls (Continued)

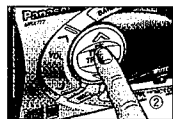
### Sound Range and Level Setting/GEQ (Graphic Equalizer)

GEQ adjustment is to adjust the level on each frequency band to let you set a tonal quality as you like.  
[Default: 0 dB at each frequency; adjustable range: -12 dB to +12 dB (at 2-dB increments)]



- ① Press SEL to change to the GEQ mode.

GRAPHIC EQ



- ② Press TRACK to select the frequency to change the sound level as follows.

80 → 160 → 320 → 640 → 1.6 k → 4 k → 10 k (Hz)

(TRACK opposite direction)

\* Press > or < when using a remote control.

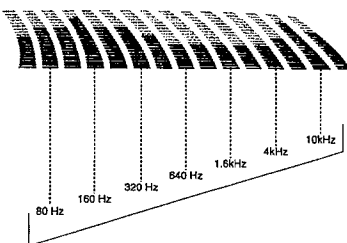


Note:  
Selected frequency blinks.

- ③ Press VOL or VOL to raise or lower the level.  
(Default: 0 dB for each frequency)  
The level is 0 dB when the cursor is at the center. Any of the 13 levels can be changed from +12 dB to -12 dB.

\* Press ^ or v when using a remote control.

Repeat steps ② and ③ to adjust the level at each frequency.  
The EQ indicator blinks during adjustment, and lights when the level is set.



### Adjusting the Tone Quality in the Memory

Tone quality (GEQ curve characteristic) settings by GEQ adjustment can be saved in the buttons 1 to 6. (Up to 6 patterns)

- ① Press SEL to change to the GEQ mode.

GRAPHIC EQ

- ② Select a frequency and adjust the level to set the GEQ.  
(See steps ② and ③ above.)

- ③ Press and hold one of the preset buttons 1 to 6 until the display blinks.

GEQ-1

Preset number

Note:  
You can change the memory setting by repeating the above procedure.

### Recalling GEQ Memory

- ① Press SEL to change to the GEQ mode.  
② Press one of the buttons (1 to 6) to recall the desired GEQ.  
The preset GEQ curve is displayed.

### Balance and Fader Adjustment

- ① Press SEL to change to BAL/FAD mode.

BAL/FAD

- ② Balance Adjustment

Press TRACK or TRACK to shift the sound volume to the right or left speakers.

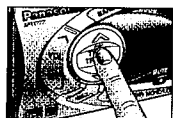
\* Press > or < when using a remote control.

- Fader Adjustment

Press VOL or VOL to shift the sound volume to the front or rear speakers.

\* Press ^ or v when using a remote control.

## Sound Controls (Continued)



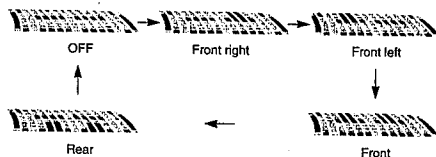
### Changing Listening Position / Seat Position Change

The seat position function reproduces a sound image ideal to the listener according to his or her place in the car.

- ① Press SEL to change to POSITION SEL mode.  
② Press TRACK to change the position as follows.  
(Default: OFF)

POSITION SEL

\* Press > or < when using a remote control.



(TRACK opposite direction)

The POSI indicator blinks during adjustment, and lights when the setting is finished.

POSI (Position) Indicator

POSI

### Bass Emphasis/SBC (Super Bass Control)

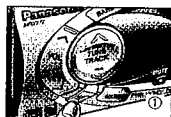
#### Emphasizing Rear Speaker Bass

Super Bass Control (Built-in amplifier rear output)

You'll find it quite easy to enjoy super bass from four speakers, using the rear speakers (built-in amplifier).

Note:

- SBC and SBC-SW cannot be used at the same time.
- SBC is for stereo output, and SBC-SW for monaural output.



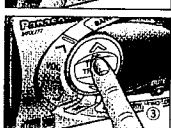
- ① Press SEL to change to SBC mode.

SUPER BASS

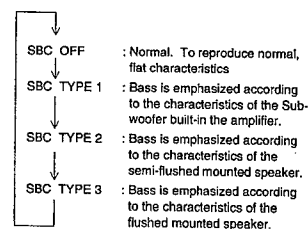


- ② When "SBC-SW" is displayed, press VOL to set SBC.  
\* Press ^ when using a remote control.

SBC OFF



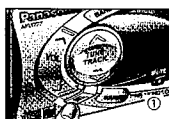
- ③ Press TRACK to change the SBC type as follows.  
(Default: SBC OFF)



(TRACK opposite direction)

\* Press > or < when using a remote control.

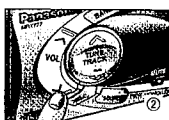
## Sound Controls (Continued)



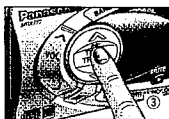
### Setting a SBC-SW Type

**Using Rear Speaker Exclusive to Subwoofer Output**  
The rear speaker (built-in amplifier) can be used as a subwoofer by setting its cutoff frequency.

(In this case, the rear speakers will be in monaural mode.)  
① Press SEL to select SBC mode.



② When "SBC-SW" is not displayed, press VOL to change to SBC-SW.  
\* Press  $\nabla$  when using a remote control.



③ Press TRACK to change to the SBC-SW cutoff frequency as follows.  
(Default: SBC-SW OFF)

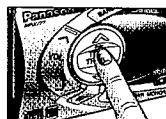


(TRACK  $\leftarrow$  : opposite direction)  
\* Press  $>$  or  $<$  when using a remote control.

OFF: Set to SBC-SW OFF when conventional speakers are connected.  
The tone is regular type, with no cutting off high frequency.

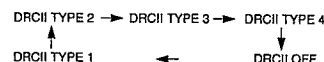
## Dynamic Road Noise Control Setting/DRCII

The DRCII function corrects noise inside the car as appropriate to the running condition of it to let you enjoy listening.



① Press SEL to change to DRCII mode.  
② Press TRACK to change the DRCII type as follows.

(Default: DRCII TYPE 2)

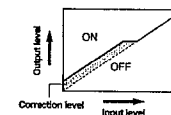
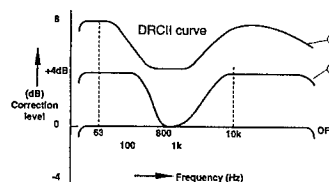


(TRACK  $\leftarrow$  : opposite direction)  
\* Press  $>$  or  $<$  when using a remote control.

The DRCII indicator blinks during adjustment, and lights when the setting is finished.

| Model | Description                          | Characteristics             |
|-------|--------------------------------------|-----------------------------|
| TYPE1 | Town drive                           | DRC curve ①, compressor OFF |
| TYPE2 | Highway drive                        | DRC curve ②, compressor OFF |
| TYPE3 | Music in low volume in town drive    | DRC curve ①, compressor ON  |
| TYPE4 | Music in low volume in highway drive | DRC curve ②, compressor ON  |

The DRCII curve changes in the pattern ① or ② as follows:



The compressor corrects low-level music signals to a level for easy listening.

## Pre-out (External Output) Setting

### Pre-out (External Output) Switching

Connect an optional power amplifier (CY-M9054EN, for example) and set it to suit your system. Your unit has a pre-out for rear output and another for Sub-woofer/front/rear output. The operating procedures for the possible setting of pre-out (Sub-woofer/front/rear) outputs are described in this section.

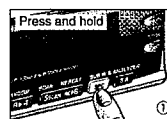
- Sub-woofer output if an external amplifier or a Sub-woofer with a built-in amplifier is connected
- Through output if a system-up speaker is connected

**Note:**  
SUB · W and THRU cannot be used at the same time.

### Sub-woofer Output (SUB · W) Mode Setting

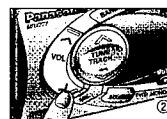
- The SUB · W indicator blinks during adjustment and lights steadily when the mode is set.

**Note:**  
• Sub-woofer output is monaural and does not change even if the volume balance of the built-in amplifier is adjusted. (See Fader, page 25.)  
• In Sub-woofer output mode, BAL/FAD, POSITION, SBC/SBC-SW, DRCII and SPACE effects are invalid.

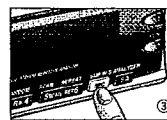


### Selecting a Sub-woofer Output Setting Item

① Press and hold SPC(SUB · W) for more than 2 seconds to change to the pre-out setting mode.



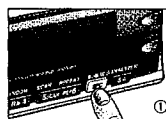
② Press VOL to display "PRE-OUT SUB · W".  
\* Press  $\nabla$  when using a remote control.



③ With Sub-woofer output selected, press SPC(SUB · W) to change to the SUB · W mode as follows.

- LEVEL SELECT: Volume Adjustment
- DELAY SELECT: Delay Time Adjustment
- FREQ SELECT: Setting Cutoff Frequency

**Note:**  
When a setting mode is selected but no operation is made within 5 seconds, the display will return to the regular operation mode.



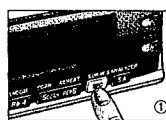
### Pre-out Output Volume Adjustment

The SUB · W indicator blinks and lights when the setting is finished.

① Press SPC(SUB · W) to change to LEVEL SELECT.  
(See page 30.)  
② Press TRACK  $\leftarrow$  or TRACK  $\rightarrow$  to decrease or increase the volume.  
(Default: 0 dB)

\* Press  $>$  or  $<$  when using a remote control.

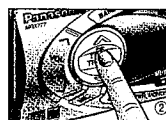
Adjusting range:  $-10$  dB  $\leftarrow$   $-10$  dB  $\leftarrow$   $-0$  dB  $\rightarrow$   $+10$  dB (at 2-dB intervals)  
 $\rightarrow$  dB: No output from the amplifier connected to the pre-out terminal (No sound is produced.)



### Sub-woofer Output Relative Volume Setting/Delay Time Adjustment

The bass volume arising from the difference between internal amplifier output and Sub-woofer output generated depending on the car size and the relative positions of the speakers can be adjusted through delay time to increase the bass larger in volume than the other sound ranges.

[Default: 0 ms, Adjusting range:  $-10$  to  $+10$  ms (1 ms each)]  
Note: 1 ms = 0.001 second



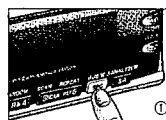
① Press SPC(SUB · W) in the pre-out setting mode to change to DELAY SELECT. (See page 30.)  
② Press TRACK  $\rightarrow$  or TRACK  $\leftarrow$  to increase or decrease the delay time.  
(Default: 0 ms)

TRACK  $\rightarrow$ : When it is set to more than  $+1$  ms, delay time increases and Sub-woofer output comes later than internal amplifier output.

TRACK  $\leftarrow$ : When it is set to less than  $-1$  ms, delay time decreases and Sub-woofer output comes sooner than internal amplifier output.

\* Press  $>$  or  $<$  when using a remote control.

The delay indicator and the ms indicator light when adjusting.

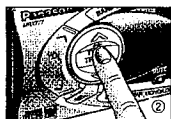


### Setting Upper Limits of Sub-woofer Output Frequency/Setting Cutoff Frequency

Set upper limits of an output bass frequency (cutoff frequency) to suit the Sub-woofers to be used.

① Press SPC(SUB · W) in the pre-out setting mode to change to FREQ. SELECT. (See page 30.)

## Pre-out (External Output) Setting (Continued)



- ② Press **TRACK** to change the frequency as follows.  
(Default: FREQ. OFF)

OFF → 100Hz → 150Hz → 200Hz

(**TRACK** opposite direction)

\* Press **>** or **<** when using a remote control.

The Hz indicator lights when setting.

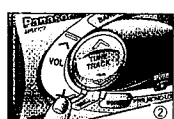
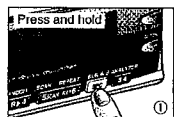
**Note:** In case of using the cutoff frequency or phase difference adjustment function of an external amplifier (available as an option), set the cutoff frequency of this CD/MD receiver to OFF and its delay time to 0 ms.

## Setting THRU Output

The THRU indicator blinks during adjustment, and lights steadily when THRU output is set.

**Note:**

- THRU output is stereo and changes as the volume balance of the built-in amplifier is adjusted. (See Fader, page 25.)
- In THRU output mode, POSITION and SBC/SBC-SW effects are invalid.



## Selecting a THRU Output Setting Item

- ① Press and hold **SPC(SUB · W)** for more than 2 seconds to change to PRE-OUT THRU mode.

- ② Press **VOL/Δ** to display "PRE-OUT THRU".

\* Press **Δ** when using a remote control.

- ③ Press **SPC(SUB · W)** to switch as follows.

LEVEL SELECT : Volume level adjustment

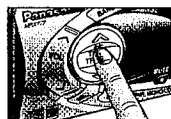
F/R SELECT : Fader interlocked

**Note:**

When a setting mode is selected but no operation is made within 5 seconds, the display will return to the regular operation mode.

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## Pre-out (External Output) Setting (Continued)



### Adjusting the volume level

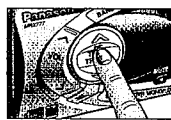
- ① Press **SPC(SUB · W)** in the PRE-OUT THRU mode to change to LEVEL SELECT mode. (See page 32.)

- ② Press **TRACK** or **TRACK** to increase or decrease the volume.

→ dB, -10 dB ← 0 dB → +10 dB

→ dB : No output (no sound) from the amplifier connected to Pre-out

\* Press **>** or **<** when using a remote control.



### Fader Adjustment Interlock Setting

Depending on the position where the system-up speaker is connected, either the front or rear can be selected to interlock with the volume balance of the built-in amplifier.  
(Default: FRONT)

- ① Press **SPC(SUB · W)** in the PRE-OUT THRU mode to change to F/R SELECT mode. (See page 32.)

- ② Press **TRACK** or **TRACK** to switch as follows.

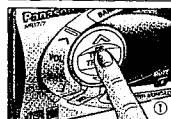
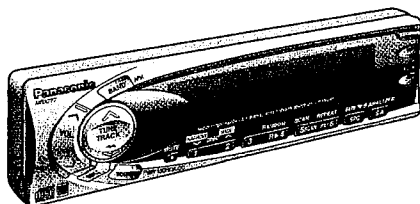
FRONT : Interlock with the front

REAR : Interlock with the rear

\* Press **>** or **<** when using a remote control.

33

## Clock Basics (The clock system is 12-hours.)



### Clock Adjustment

- ① **Hour Adjust**

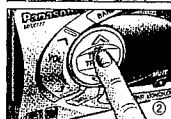
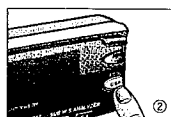
Press and hold **DISP(CLOCK)** for more than 2 seconds to select clock adjust mode.  
Clock adjust mode is selected and the clock display blinks.

ADJUST

Press **TRACK** or **TRACK** to adjust the hour.  
Keep the button depressed to change continuously.

\* Press **Δ** or **∇** when using a remote control.

8:00



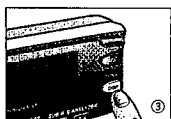
- ② **Minutes Adjust**

Press **DISP(CLOCK)** to select Minutes Adjust mode.  
Minutes adjust mode is selected and the minute display blinks.

Press **TRACK** or **TRACK** to adjust the minute.  
Keep the button depressed to change continuously.

\* Press **Δ** or **∇** when using a remote control.

8:135



- ③ When you have set the time, press **DISP(CLOCK)**.  
Regular mode is back and the clock starts running again.

Repeat the above steps from ① to ③ to readjust the clock.

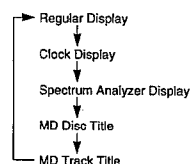
**Note:**

- Clock adjustment cannot be made when power is off.
- Clock adjustment cannot be made when MD title is displayed. Switch it back to regular display or clock display before making clock adjustment.



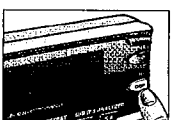
### Clock Display ON/OFF

Clock or MD title can be displayed on the character display.  
(Default: Regular display of sources)  
Press **DISP(CLOCK)** to change the display as follows.



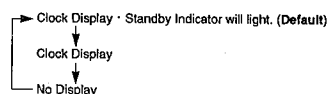
**Note:**

- "ADJUST" is displayed in the clock display mode when the clock is not adjusted.
- No changeover to MD title display when the radio, CD, or an external device is in use.



### Clock Display (Power Off)

Press **DISP** after turning off the power.  
Press **DISP** to change the display as follows.



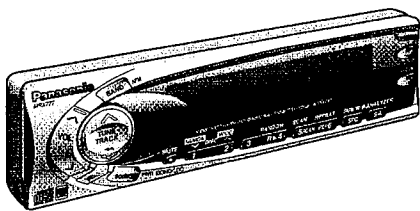
**Note:**

- "ADJUST" is displayed in the clock display mode when the clock is not adjusted.
- Clock adjustment cannot be made when power is off.

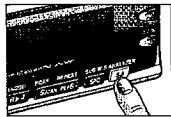
34

35

## Useful Functions



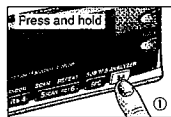
### Switching Spectrum Analyzer Display



Press **S-A** to change to the spectrum analyzer display in the 16 patterns (DEMO, WAVE, AURORA, etc.).

**Note:**

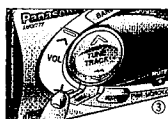
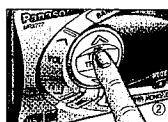
- DEMO mode is initially displayed. There may be cases where the buttons cannot be operated in DEMO mode. If so, change the spectrum analyzer display to other than DEMO mode.
- Only the spectrum analyzer lamp goes out if BLANK SPEANA is selected.
- The whole display, including the lights, goes out if ALL DISP OFF is selected. (It lights when this operation is performed, and goes out again in about 5 seconds after the operation.)



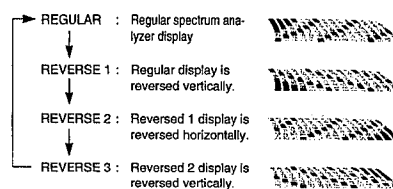
### Spectrum Analyzer Arrangement

The spectrum analyzer display can be changed as follows. (Default: NORMAL/Spectrum Analyzer POSI)

- ① To change to spectrum analyzer arrangement mode, press and hold **S-A** for more than 2 seconds. The display blinks in spectrum analyzer arrange mode.



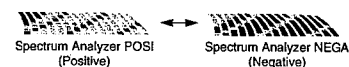
- ② To change the spectrum analyzer display  
Press **TRACK** to change the display as follows.



(**TRACK** opposite direction)

\* Press the **>** or **<** when using a remote control.

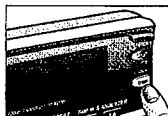
- ③ Press **VOL** or **VOL** to switch the display as follows.



\* Press the **^** or **v** when using a remote control.

**Note:**

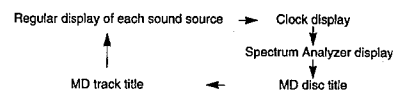
When a setting mode is selected but no operation is made within 5 seconds, the display will return to the normal operation mode.



### To Turn Dot Display into Spectrum Analyzer Display

The spectrum analyzer can be shown on the display. (Default: Regular display of each sound source)

Press **DISP** to change the display as follows:

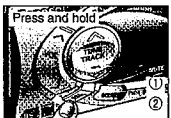


**Note:** Neither display pattern change nor display arrangement can be made.

36

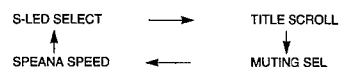
37

## Other Settings



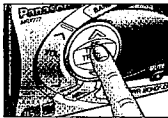
### Function Setting Mode Selection

- ① Press and hold **SEL** for more than 2 seconds to change to the function setting mode.
- ② Press **SEL** to change the function setting mode as follows.



**Note:**

When a setting mode is selected but no operation is made within 5 seconds, the display will return to the regular operation mode.



### Title Scroll Setting

When the display shows an MD title, the title can be made to move.

- ① Press **SEL** in the function setting mode to change to "TITLE SCROLL". (See page 38.)
- ② Press **TRACK** or **TRACK** to switch the scroll mode as follows. (Default: TITLE SCROLL ON)

Scroll on : MD title moves.

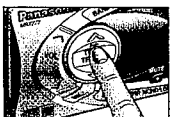


Scroll off : MD title stops moving.

\* Press **>** or **<** when using a remote control.

**Note:**

Press and hold **DISP** for more 2 seconds, the display can be scrolled one cycle only, when the MD title scroll is off.



### Lighting Security Indicator

This function is valid only when the front panel is removed.

The security indicator lights when the removable face plate is taken off. (See page 43.) The security indicator can be turned off. (Default: LED ON)

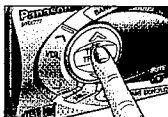
- ① Press **SEL** in the function setting mode to change to "S-LED SELECT".
- ② Press **TRACK** or **TRACK** to switch the security indicator as follows.

LED ON : Security Indicator turns on.



LED OFF : Security Indicator turns off.

\* Press **>** or **<** when using a remote control.



### Spectrum Analyzer Speed Setting

- ① Press **SEL** in the function setting mode to change to "SPEANA SPEED".
- ② Press **TRACK** or **TRACK** to switch the spectrum analyzer speed as follows. (Default: FAST)

FAST : Spectrum Analyzer display moves fast.



SLOW : Spectrum Analyzer display moves slowly.

\* Press **>** or **<** when using a remote control.

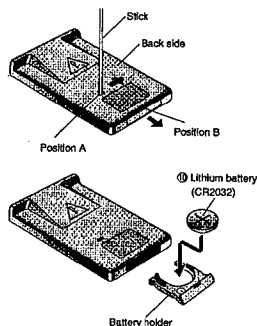
38

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## Remote Control Basics

### Battery Replacement:

1. **Remove the battery case.**  
Pull the case by the Position B after pushing Position A with inserting a slender and strong stick into the slot in the directions indicated by the each arrow.
2. **Replace the battery.**  
Set a new battery properly with side up as illustrated.
3. **Insert the battery holder.**  
Push in the holder to the original position.



### Note on Batteries:

Old battery must immediately be removed and disposed.

Battery Information:

- Designated Battery: Panasonic Lithium Battery (CR2032)
- Battery Life: 6 months with normal use (in normal room temperature)

#### Caution:

Improper use of batteries may cause overheating, explosion or ignition, resulting in injury or fire. Battery leakage may cause damage to the unit.

- Do not disassemble or short the batteries. Do not throw the batteries into a fire.
- To avoid the risk of accident, keep the batteries out of reach of children.

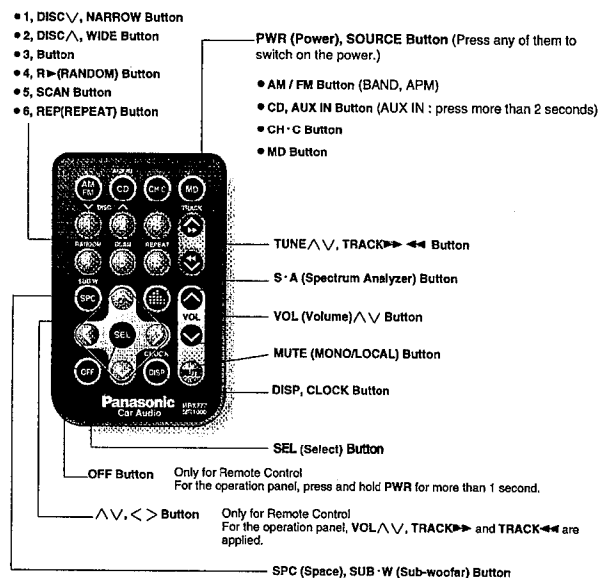
In using the remote control, operate it in the same way as you operate the control panel, but remember the following.

No DIMMER button on remote control. (For the dimmer function, use the control panel.)

#### Note:

The remote control does not operate if the control panel is open or removed.

Aim the remote control at the sensor of your unit. (See page 4)



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## Anti-Theft System

This unit is equipped with a removable face plate. By removing this face plate, the radio becomes totally inoperable. The security indicator will blink.

### To Remove the Removable Face Plate

- ① Switch off the power.
- ② Press OPEN to open the removable face plate.

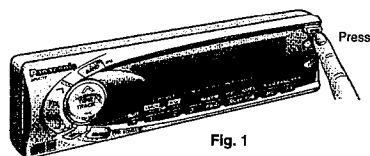


Fig. 1

- ③ Push the face plate to either right or left, then pull it out toward yourself.

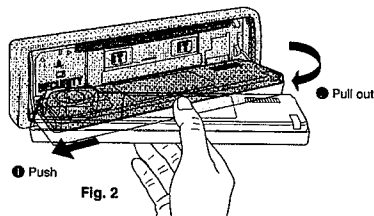


Fig. 2

- ④ As shown in Fig.3, gently push the lower side of the case and open its cover. Keep the removable face plate in the case. Then, you can bring the plate safely.

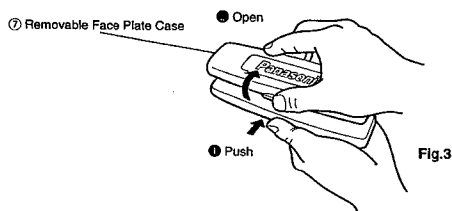


Fig.3

### To install the Removable Face Plate

- ① Fit the left hole of the face plate to the left pin of the main unit, then fit the right hole to the right pin.

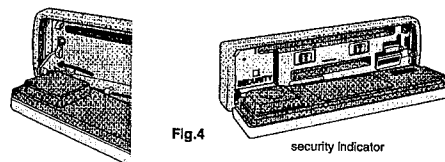


Fig.4

- ② After fitting the face plate holes, move the face plate up and down a few times to make sure that it has been placed securely.

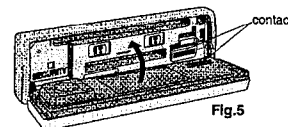


Fig.5

- ③ Close the front panel and press the right side of face plate until "click" is heard.

#### Caution:

1. Before removing the removable face plate, make sure the power is off.
2. This removable face plate is not water-proof. Do not expose it to water or excessive moisture.
3. Do not remove the removable face plate, while driving your car.
4. Do not place the removable face plate on the dashboard or nearby areas where the temperature rises to high levels.
5. Do not touch the contacts on the removable face plate or on the main unit, since this may result in poor electrical contacts.
6. If dirt or other foreign substances get on the contacts, wipe them with a clean, dry cloth.
7. When the front panel is opened, do not force it down and do not put anything on it since these may result in damage to the unit.

### Security Indicator

The security indicator blinks when the removable face plate is removed from the unit.

#### Activate and Security Indicator

Press and hold SEL for more than 2 seconds when the power is on. "S-LED SELECT" is displayed. Press TRACK >> or TRACK << to turn on the security indicator.

| Display   | Security Indicator           |
|-----------|------------------------------|
| S-LED ON  | Blinks                       |
| ↑↓        | (Press TRACK >> or TRACK <<) |
| S-LED OFF | OFF                          |

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# Installation

## Preparation

- Before installation check the radio operation with antenna and speakers.
- Disconnect the cable from the negative (-) battery terminal (see caution below).
- Unit should be installed in a horizontal position with the front end up at a convenient angle, but not more than 30°

## Caution:

For installation to cars with trip or navigational computers, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected. For this type of car, battery could not be disconnected. Therefore, extra care should be taken to prevent short circuiting.

## In-dash Installation

### Installation Opening

In-dash installation can be done if the car's dashboard has an opening for this unit as shown in Fig. 1. The car's dashboard should have a thickness of 4.5 mm - 6 mm in order to make the installation of the unit.

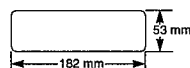


Fig. 1

## Installation Precautions

This equipment, if possible, should be installed by a professional installer.

In case of difficulty, please consult your nearest authorized Panasonic Service Center.

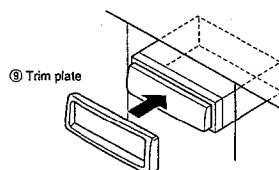
1. This system is to be used only in a 12-volt, DC battery system (car) with negative ground.
2. Follow the electrical connection on page 47 to 48 carefully. Failure to do so may result in damage to the unit.
3. Connect the power lead after other connections are made.
4. Be sure to connect the YELLOW lead to the positive terminal (+) of the battery or fuse block (BAT) terminal.
5. Insulate all exposed wires to prevent short circuiting.
6. Secure all loose wires after installing the unit.
7. Please carefully read the operating and installation instructions of the respective equipment before connecting it to this unit.

## Installation Hardware

| No. | Item                          | Diagram | Qty | No. | Item                      | Diagram | Qty |
|-----|-------------------------------|---------|-----|-----|---------------------------|---------|-----|
| ①   | Mounting Collar               |         | 1   | ⑥   | Power Connector           |         | 1   |
| ②   | Hex. Nut (5 mmφ)              |         | 1   | ⑦   | Removable Face Plate Case |         | 1   |
| ③   | Rear Support Strap            |         | 1   | ⑧   | Remote Control Unit       |         | 1   |
| ④   | Tapping Screw (5 mmφ x 16 mm) |         | 1   | ⑨   | Trim Plate                |         | 1   |
| ⑤   | Mounting Bolt (5 mmφ)         |         | 1   | ⑩   | Lithium battery           |         | 1   |

# Installation (Continued)

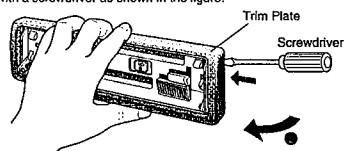
## 3. Insert the Trim plate ⑨.



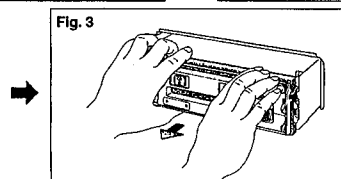
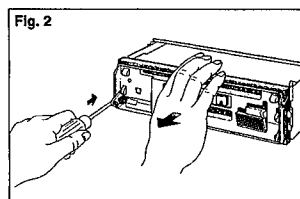
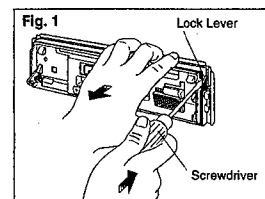
## 4. After installation reconnect the negative (-) battery terminal.

### To Remove the Unit

- a) Remove the removable face plate. (See page 42.)
- b) Remove the trim plate with a screwdriver as shown in the figure.



- c) Pull out the unit while pushing two lock levers using a screwdriver.
- d) Remove the unit pulling with both hands.

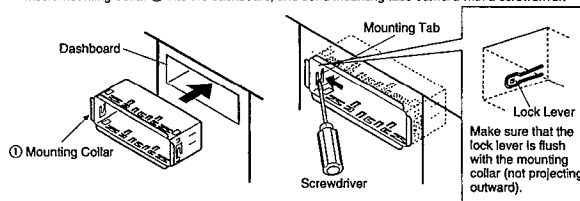


## Installation Procedures

**Note:** Disconnect the cable from the negative (-) battery terminal.

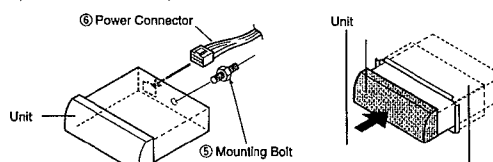
### 1. Secure the Mounting Collar ①.

Insert Mounting Collar ① into the dashboard, and bend mounting tabs outward with a screwdriver.



### 2. Secure the rear of the unit.

- a) Check the electrical connection by referring to these operating instructions.
- b) Connect the Mounting Bolt ⑤, using a suitable wrench.
- c) Insert Power Connector ⑥ to the unit.



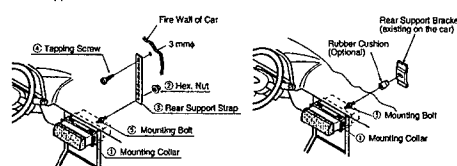
- d) Insert the unit into Mounting Collar ① and push it in until "click" is heard.
- e) Secure the rear of the unit to the car by either of the two recommended methods.

### ■ Using the Rear Support Strap ③

Affix one end of the Rear Support Strap ③ to the rear of the unit, and the other end to the Fire Wall of Car, or some other metallic area.

### ■ Using the Rubber Cushion (Optional)

(If there is an existing Rear Support Bracket on the Fire Wall of Car.)  
Cover Mounting Bolt ⑤ on the rear of the unit with Rubber Cushion, and mount it into the existing Rear Support Bracket.



# Electrical Connections

## Before Wiring Connection

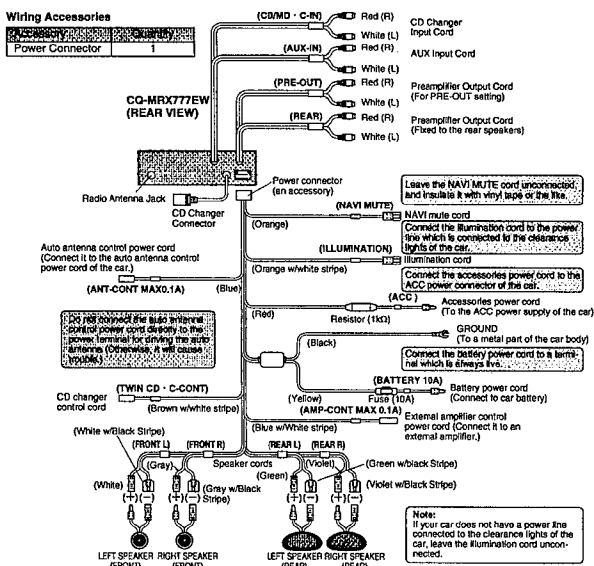
### Note:

For installation in cars with trip or navigational computers, all electronic memory settings previously registered in the computer will be lost when the battery terminal is disconnected. Do not disconnect the battery in vehicles equipped with these units. Therefore, extra care should be taken to prevent short-circuits.

- This unit can be connected to an optional CD changer (CX-DP801EN and optional extension cord).
- For details, consult your nearest Panasonic dealers.
- For connection to a CD changer, refer to the operating instructions of the CD Changer (CX-DP801EN).

### Caution:

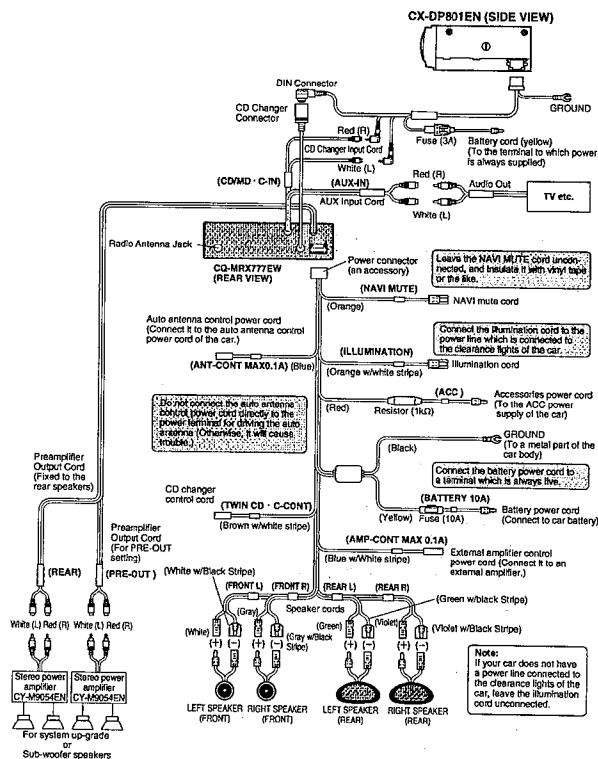
- To prevent damage to the unit, be sure to follow the connection diagram as follows.
- Remove about 5 mm of protective covering from the ends of the leads before connecting.
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires from a possible short-circuit from the car chassis. Bundle all cables and keep cable terminals free from touching any metal parts.



## Electrical Connections (Continued)

### Example (CD Changer and Eight Speakers)

- This set can be used for connection to an optional CD changer, for example, Model CX-DP801EN.



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## Troubleshooting continued

### ■ Error Display Messages (CD/MD Player)

| Display   | Possible Cause  | Problem                                   | Probable Solution   |
|-----------|---|---|---|
| CD - E1 - | • Disc dirty or wrong side up                           | Disc is automatically ejected.            | Check the disc.   |
| MD - E1 - | • Data MD or blank MD                                   |   |   |
| CD - E2 - | Disc damaged  | Receiver fails to operate for some cause. | Open control panel and press CD ▲ or MD ▲ button. If receiver still does not work, remove control panel, press the reset button on receiver, and place control panel back on. If it still fails to operate normally, ask your dealer or nearest service station for repair. |
| MD - E2 - |   |   |   |
| CD - E3 - | Receiver fails to operate for some cause.               | —   | Open control panel and press CD ▲ or MD ▲ button.   |
| MD - E3 - |   |   |   |
| PLS EJECT | Attempt is made to start CD or MD before eject is over. | —   | Open control panel and press CD ▲ or MD ▲ button.   |

### ■ Error Display Message (CD Changer)

| Display      | Possible Cause                | Problem                                   | Probable Solution   |
|--------------|-------------------------------|---|---|
| CD CH - E1 - | • Disc dirty or wrong side up | Next disc is automatically selected.      | Eject magazine and check the disc.  |
| CD CH - E2 - | • Data MD or blank MD         |   |   |
| CD CH - E3 - | Disc damaged                  | Receiver fails to operate for some cause. | Press EJECT button on changer. If trouble is unremedied, press the reset button on changer. If trouble still persists, ask your dealer or nearest service station for repair. |
| CD CH - E3 - |                               |   |   |
| NO DISC      | No disc at all in magazine    | —   | Insert discs into magazine.   |

#### Note:

- A number before E1 or E2 indicates the number of an error disc.
- Display contents and operations vary in part from one changer to another (due to the differences in changer specifications). For details, refer to the manual for the changer you are using.

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## Troubleshooting

### ■ Maintenance

Your product is designed and manufactured to ensure a minimum of maintenance. Use soft cloth for routine exterior cleaning. Never use benzine, thinner or other solvents.

### ■ When Something Doesn't Work

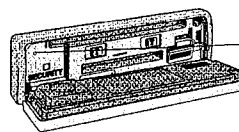
Check the charts for possible causes and solutions to any problem you might be experiencing. Some simple checks or minor adjustments may eliminate the problem.

### ■ Product Servicing

If the suggestions in the charts don't solve the problem, we recommend that you take it to your nearest authorized Panasonic Servicenter. The unit should be serviced only by a qualified technician.

### ■ Replacing the Fuse

Use fuses of the same specified rating 10 amps. Using different substitutes or fuses with higher ratings, or connecting the unit directly without a fuse, could cause fire or damage to the stereo unit. If the replacement fuse fails, contact your nearest Panasonic Servicenter for service.



#### Reset Switch

If you press this switch with a tough pointed object, an initial setting is restored after abnormal recovery. However, all memorized settings are canceled at that time.

#### Caution:

- Press this button when any operation buttons do not function. If the unit does not become restored even after pressing the button, contact your nearest Panasonic Servicenter for service.

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## Troubleshooting Tips

### ■ Power

| Problem             | Possible Cause                         | Probable Solution  |
|---------------------|--|--|
| Unit won't turn on. | Dead vehicle battery. Ignition not on. | Charge vehicle battery. Turn Ignition to On or Acc.            |
|                     | Bad each line connection.              | Check connections.   |
|                     | Bad power battery line connection.     | Connect battery cables to terminals that are always live.      |
|                     | Bad Accessory line connection.         | Connect accessory power cord with ACC power supply of the car. |
|                     | Fuse burned out.                       | Replace it with one of the specified rating.                   |

### ■ General

| Problem                          | Possible Cause                             | Probable Solution   |
|----------------------------------|--|---|
| No Sounds                        | Dead vehicle battery. Ignition not on.     | Turn ignition to On or Acc.                                   |
|                                  | Power is not on.                           | Press PWR button to switch power on before making adjustment. |
|                                  | Volume is too low.                         | Raise volume.   |
|                                  | Bad each line connection.                  | Check connections.  |
|                                  | Bad power battery line connection.         | Connect battery cables to terminals that are always live.     |
|                                  | Bad Accessory line connection.             | Check connections.  |
|                                  | Bad Ground line connection.                | Connect grounding wire to a metal part of car.                |
|                                  | Bad Speaker line connection.               | Check connections.  |
|                                  | Bad NAVI MUTE line connection.             | Leave the illumination cord unconnected.                      |
|                                  | Condensation                               | Wait for some time before use.                                |
| No operation by pressing buttons | Spectrum analyzer display is in demo mode. | Select other than demo mode before operating.                 |

51

# Troubleshooting continued


## ■ Clock

| Problem            | Possible Cause   | Probable Solution                                 |
|--------------------|------------------|---|
| Clock unadjustable | Power is not on. | Press PWR button to switch power on, then adjust. |

## ■ Radio

| Problem   | Possible Cause  | Probable Solution   |
|---|---|---|
| Much noise in FM stereo and monaural broadcasts | Station is too far or signals are too weak.                                   | Tune in to a station emitting strong signals.   |
| Presettings lost from memory                    | Bad power battery line connection.<br>Fuse for battery power cables is blown. | Connect battery cables to terminals that are always live.<br>Replace it with one of the specified rating. |

## ■ CD/MD

| Problem                               | Possible Cause   | Probable Solution  |
|---------------------------------------|--|--|
| CD cannot be inserted.                | You are trying to insert another disc when one is already inside.                            | Eject the one inside before inserting another.   |
| MD cannot be inserted.                | You are inserting it in the wrong direction.   | Hold it with label side up, and insert it in the correct direction.  |
| CD/MD cannot be ejected.              | <ul style="list-style-type: none"> <li>CD/MD defective</li> <li>Mechanical defect</li> </ul> | Open control panel and press  button. If CD/MD cannot still be ejected, remove control panel, press RESET switch on receiver, place control panel back on. If trouble is still unrepaired, ask your dealer or nearest service station for repair. |
| No sound after inserting CD/MD        | CD/MD inserted wrong side up.  | CD/MD inserted wrong side up.  |
|                                       | CD/MD dirty  | Clean CD/MD, referring to instructions for CD/MD cleaning.   |
|                                       | Data MD or blank MD  | Use a music MD or an MD where music is recorded.   |
| CD/MD sound skip; power sound quality | CD/MD dirty  | Clean CD/MD, referring to instructions for CD/MD cleaning.   |
| Sound skip due to vibration           | Mounted at an angle of over 30 degrees   | Adjust mounting angle to be less than 30 degrees.  |
|                                       | Mounted unsteady   | Securely fasten receiver and mounting parts, referring to instructions for installation.   |

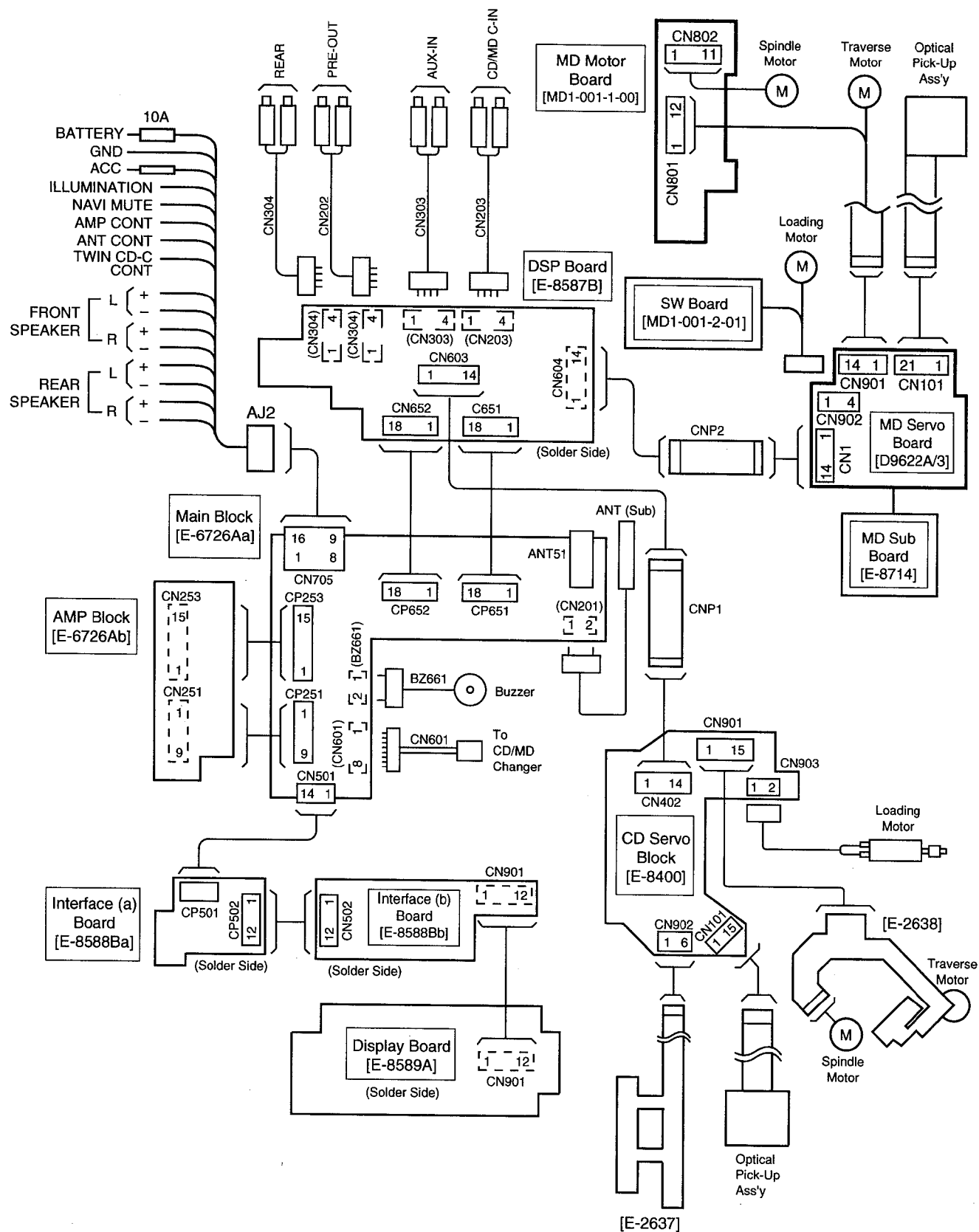
## ■ Sound Control

| Problem   | Possible Cause                          | Probable Solution                            |
|---|---|--|
| No sound from left, right, front, or rear speaker | Left-right, front-rear balance is off.  | Properly adjust BAL/FAD.                     |
| Only bass sound from rear speaker                 | SBC-SW type set to cutoff frequency ON. | Set SBC-SW type to cutoff frequency OFF.     |
| No sound from PRE-OUT                             | PRE-OUT volume level set to --dB.       | Set PRE-OUT volume level to other than --dB. |
| Right and left sounds reversed in stereo          | Speaker wires are connected wrong.      | Speaker wires are connected wrong.           |

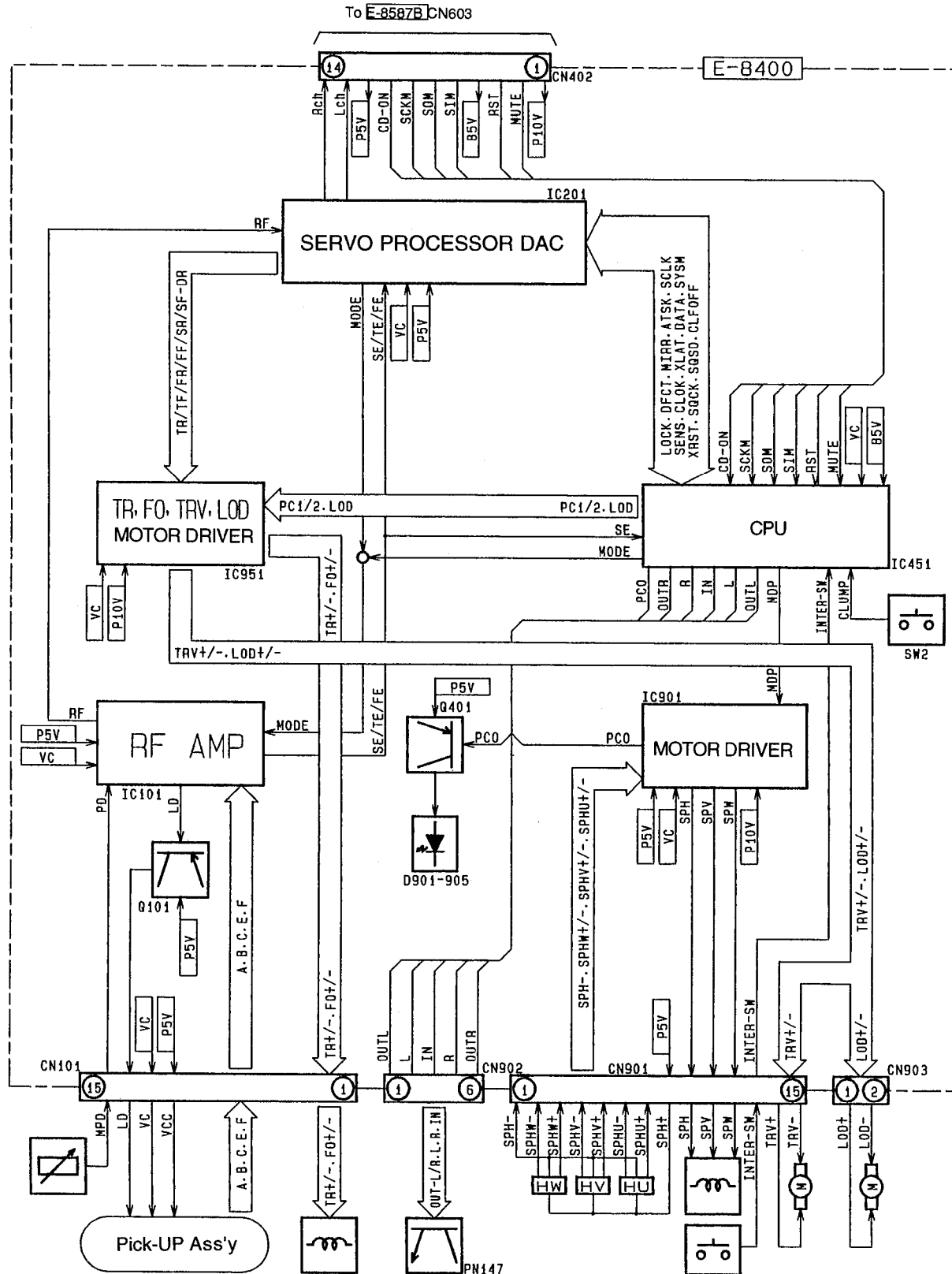
## ■ Remote Control

| Problem                          | Possible Cause                           | Probable Solution  |
|----------------------------------|--|--|
| No operation by pressing buttons | Battery inserted in wrong direction.     | Insert a battery correctly.  |
|                                  | Battery has run down.                    | Replace battery.   |
|                                  | Remote control not in correct direction. | Direct the remote control at the REMOTE (Sensor) on the control panel. |

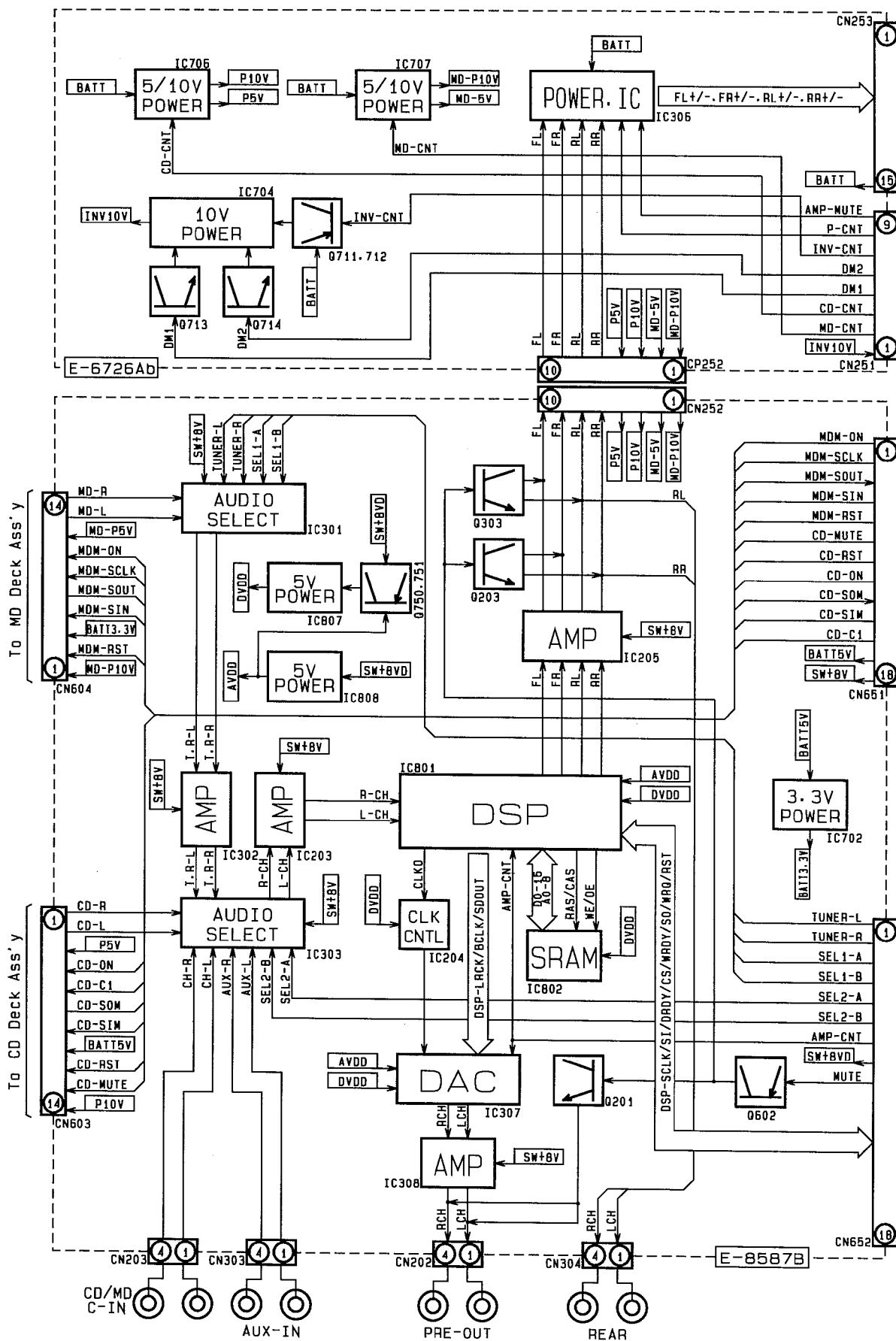
## WIRING CONNECTION



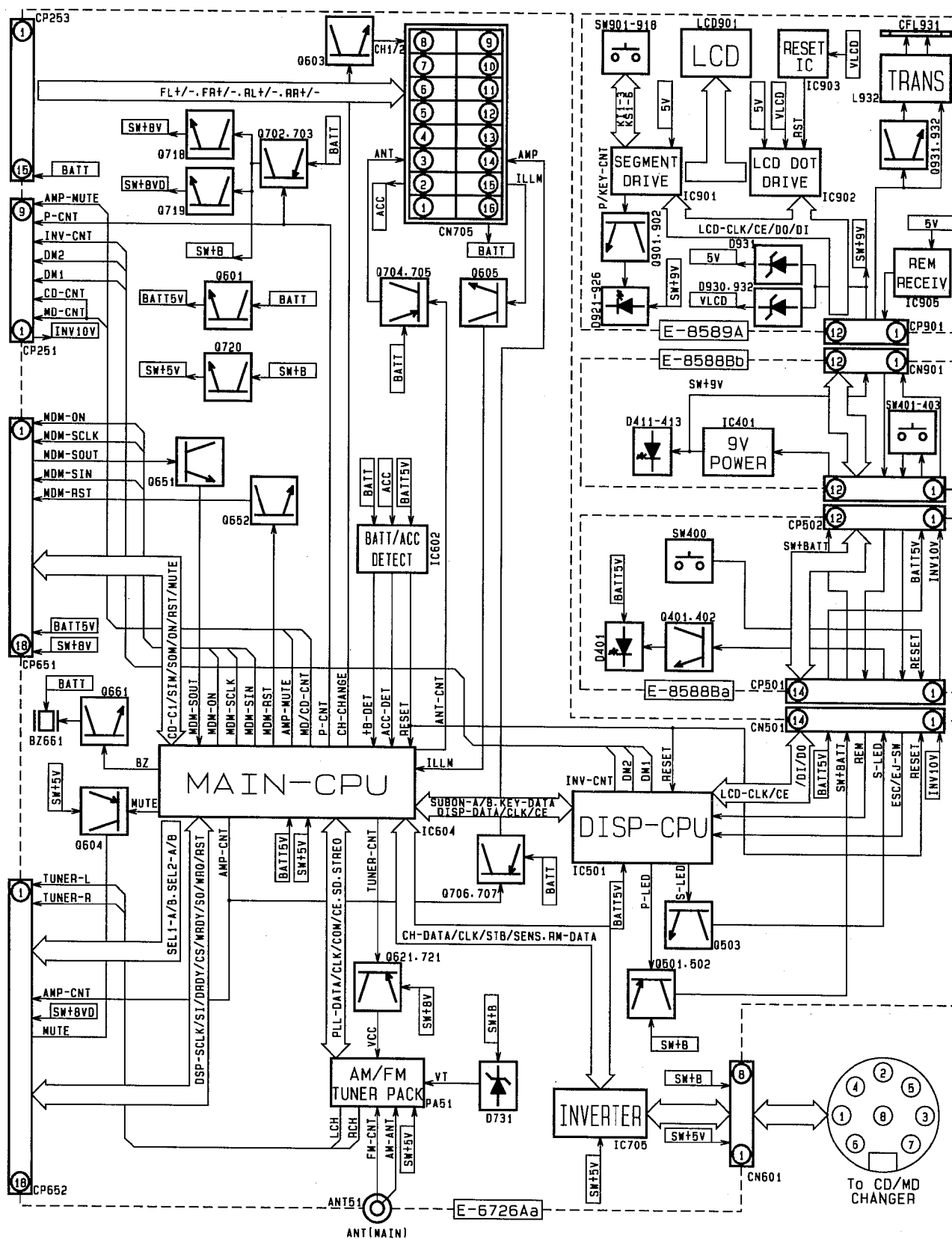
## BLOCK DIAGRAM (CD Servo Block)



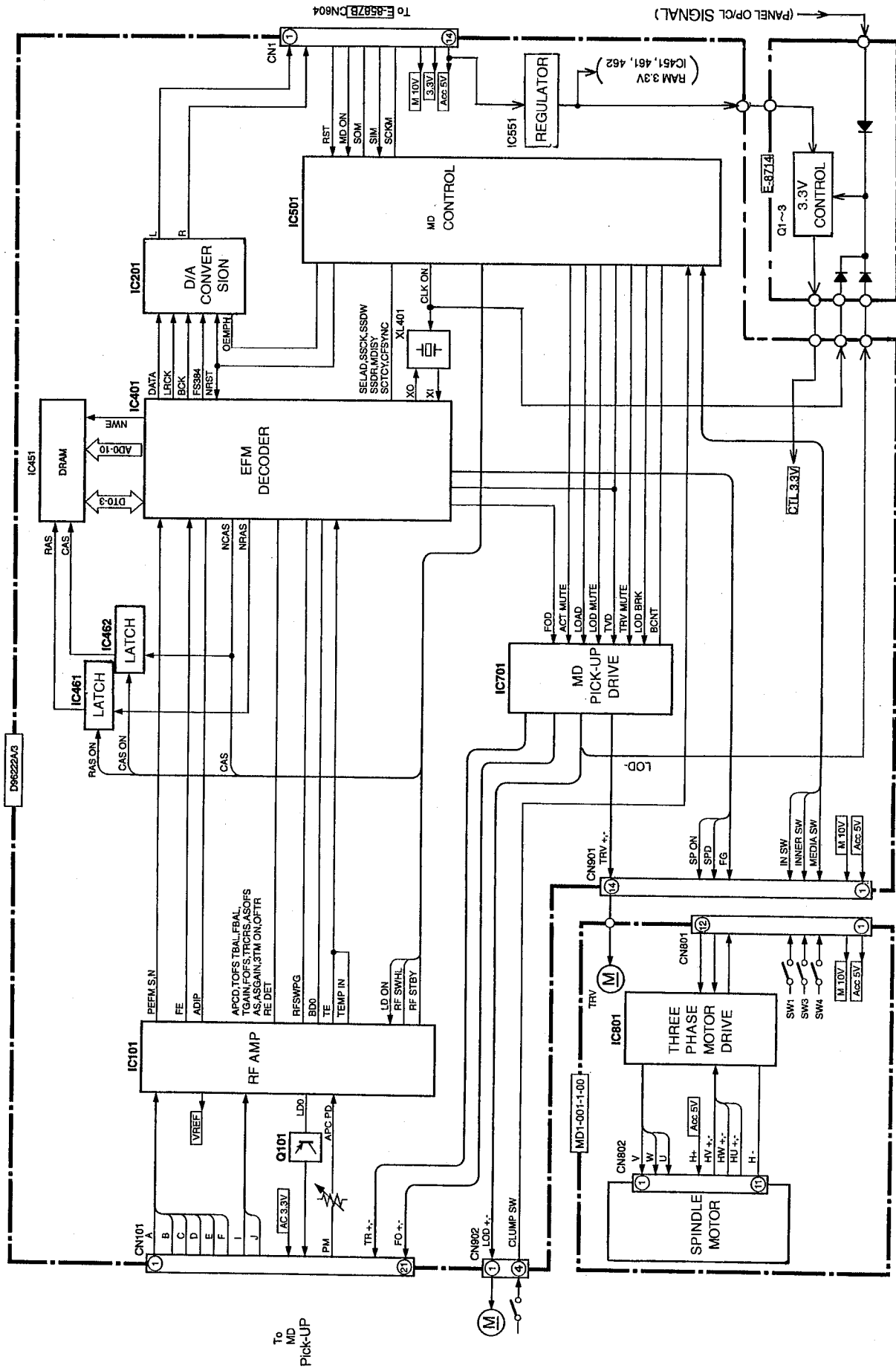
## BLOCK DIAGRAM (DSP/AMP Block)



## BLOCK DIAGRAM (Main / Interface / Display Block)



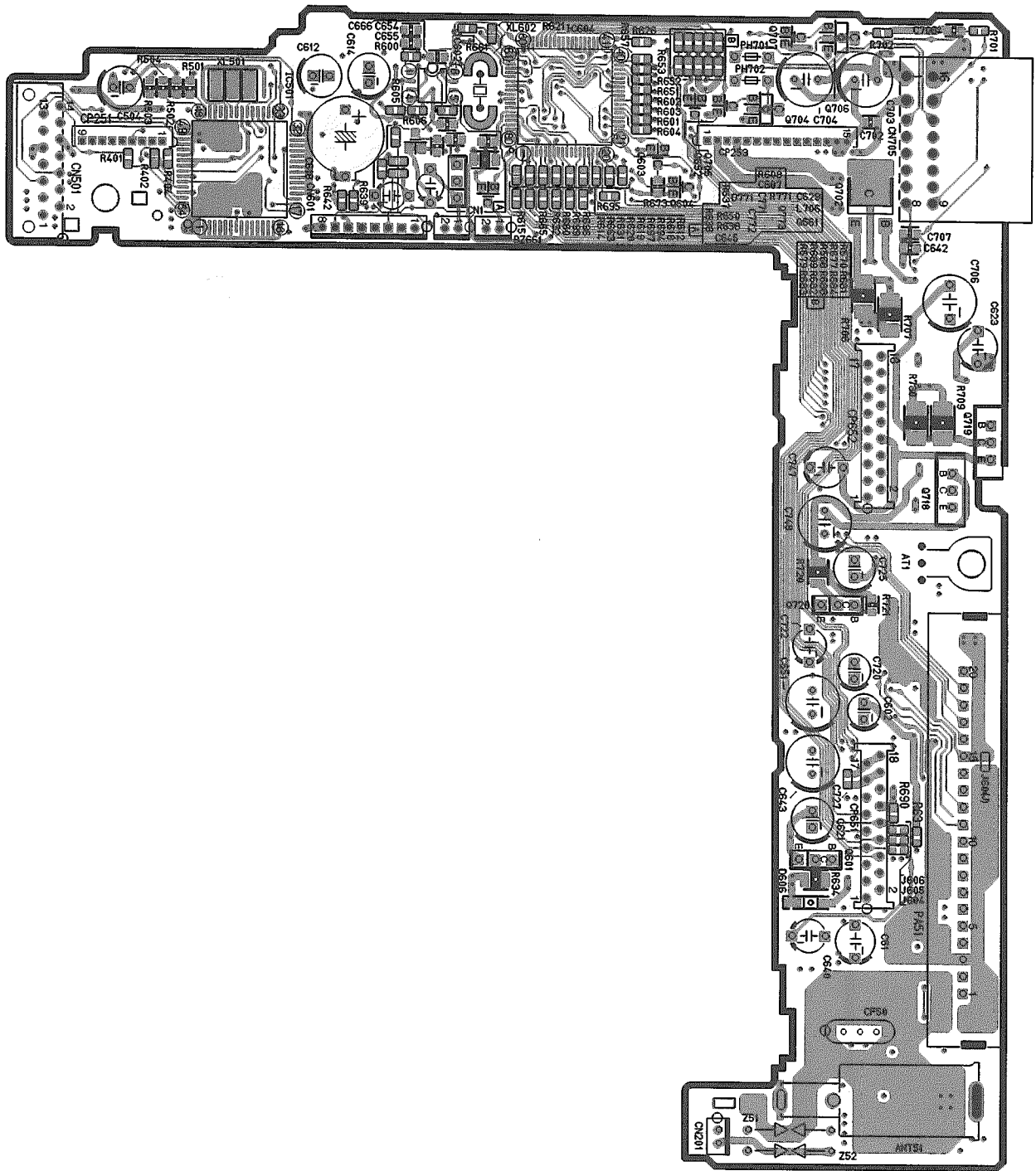
## BLOCK DIAGRAM (MD Servo Block)



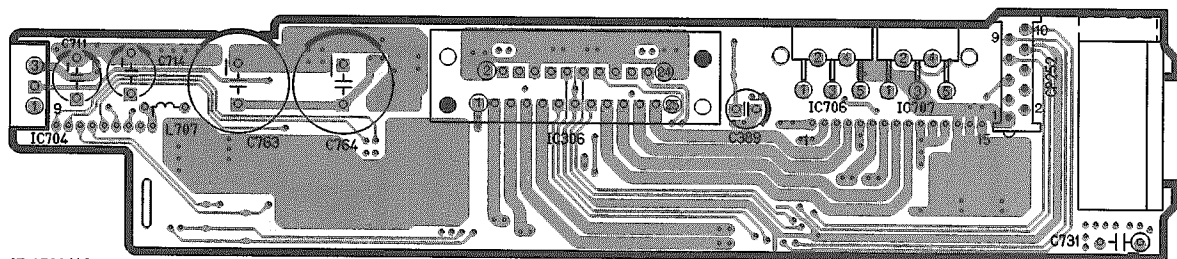




# WIRING DIAGRAM (Main /AMP Block -1)

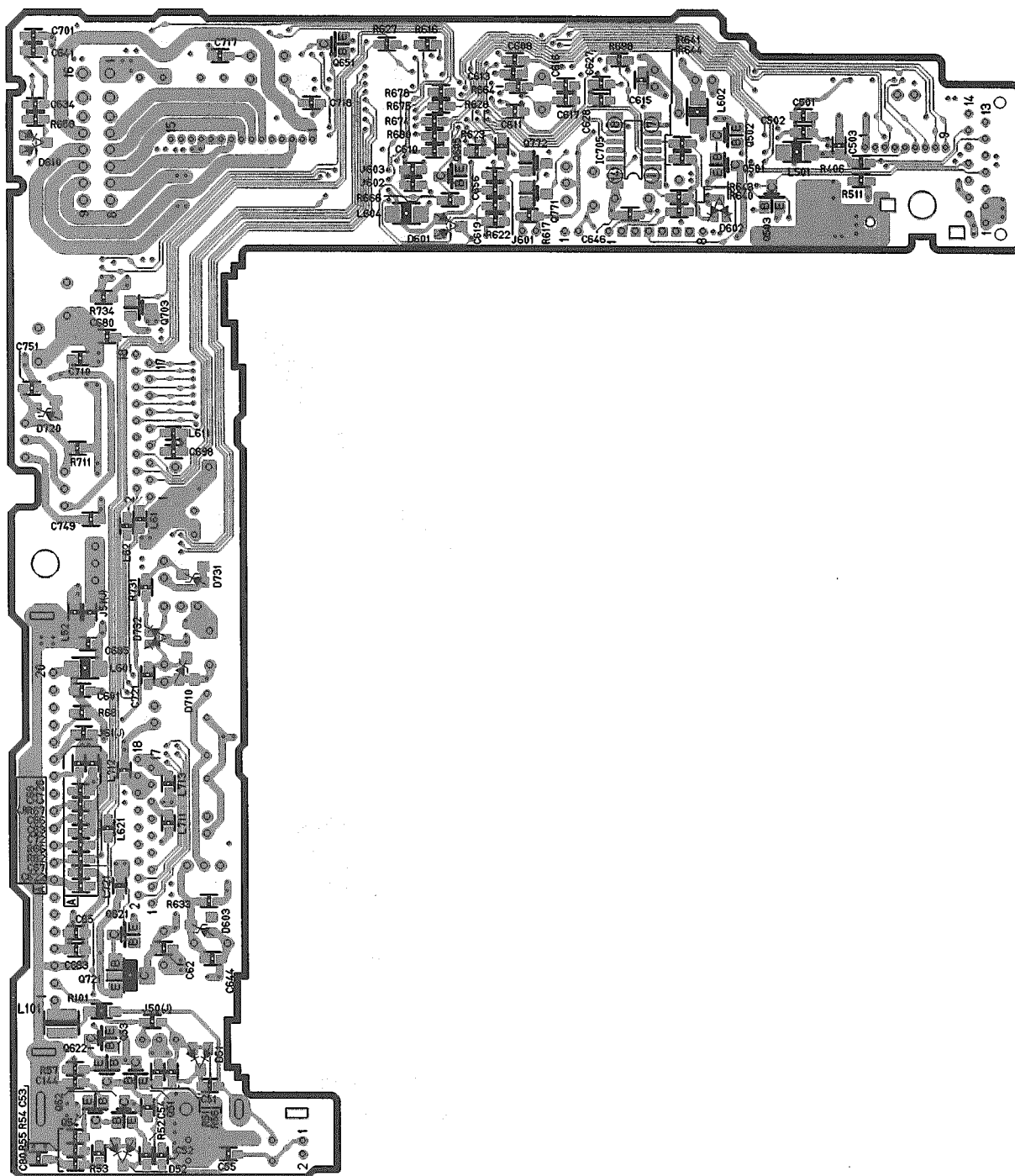


[E-6726Aa] [TOP VIEW]

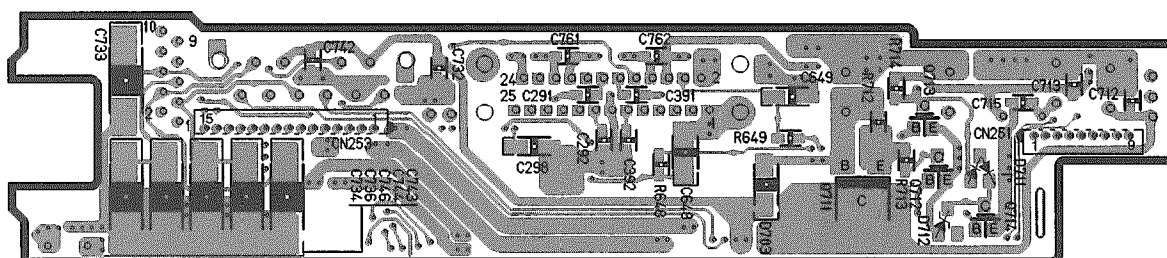


[E-6726Ab] [TOP VIEW]

## WIRING DIAGRAM (Main /AMP Block -2)



[E-6726Aa] [BOTTOM VIEW]

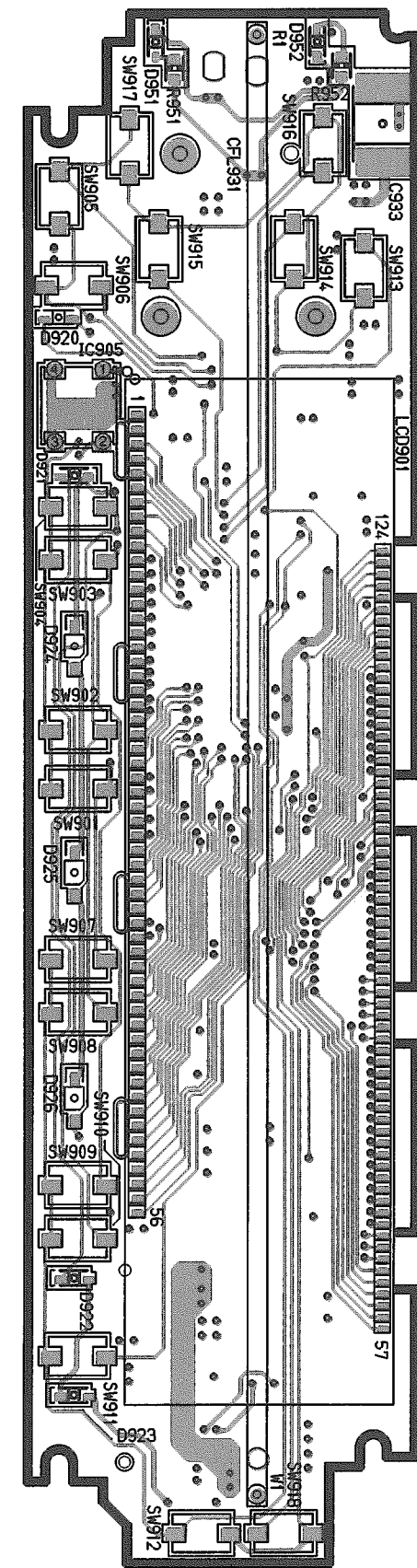


[E-6726Ab] [BOTTOM VIEW]

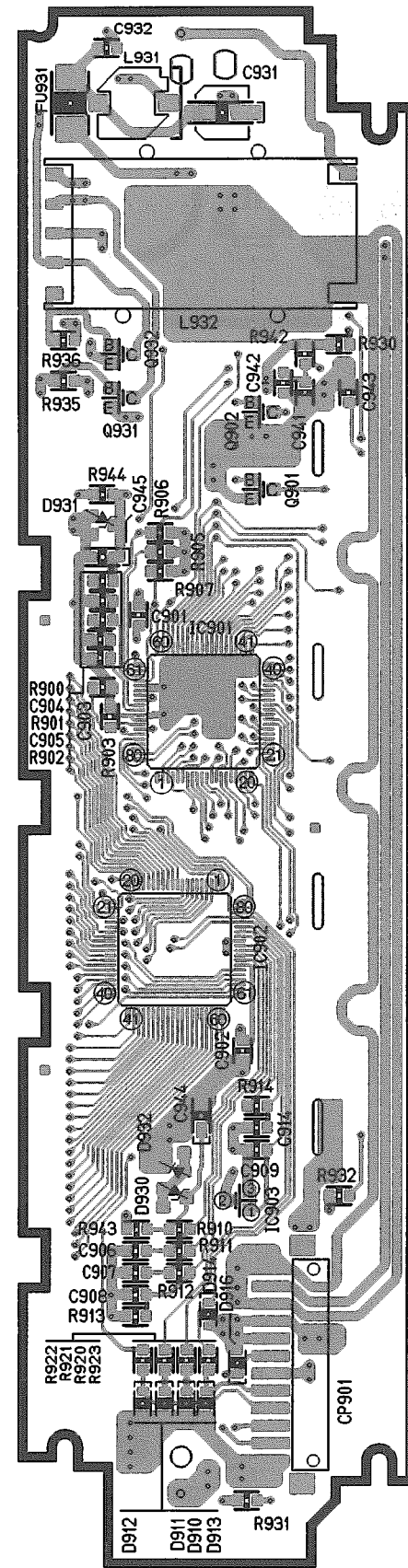




# WIRING DIAGRAM (Display Block)

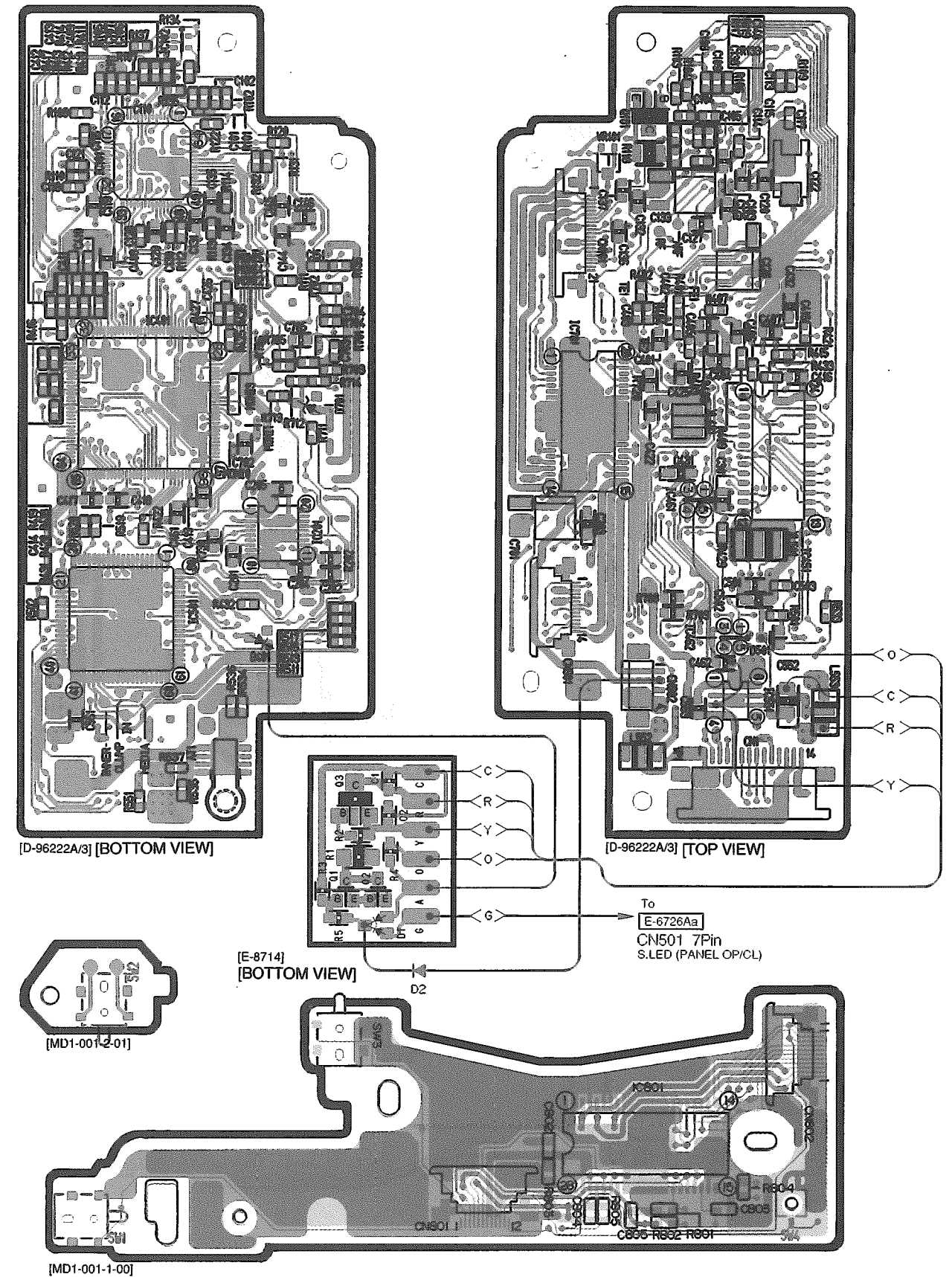


[E-8589A] [TOP VIEW]

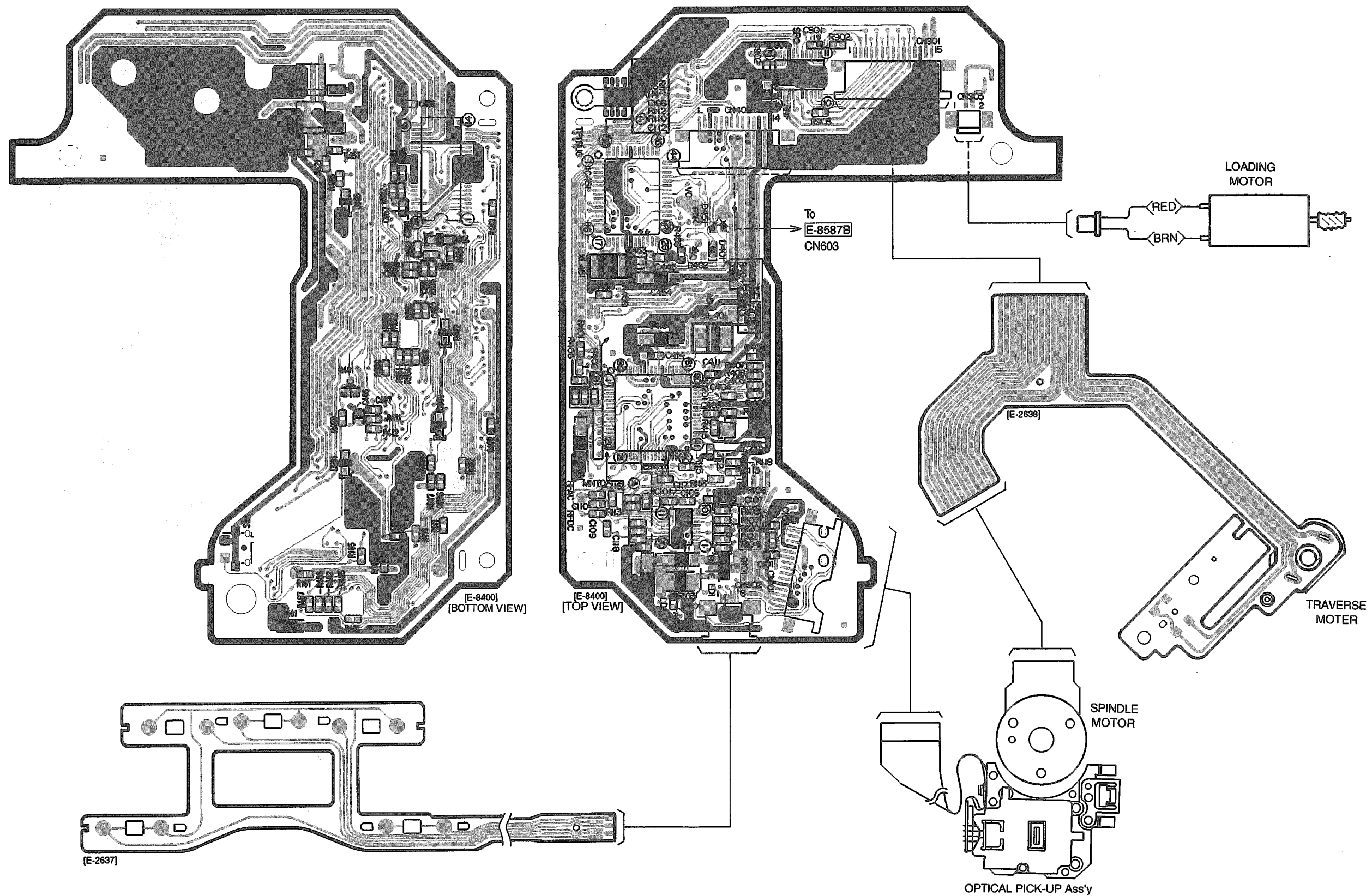


[E-8589A] [BOTTOM VIEW]

# WIRING DIAGRAM (MD Servo Block)



## WIRING DIAGRAM (CD Servo Block)

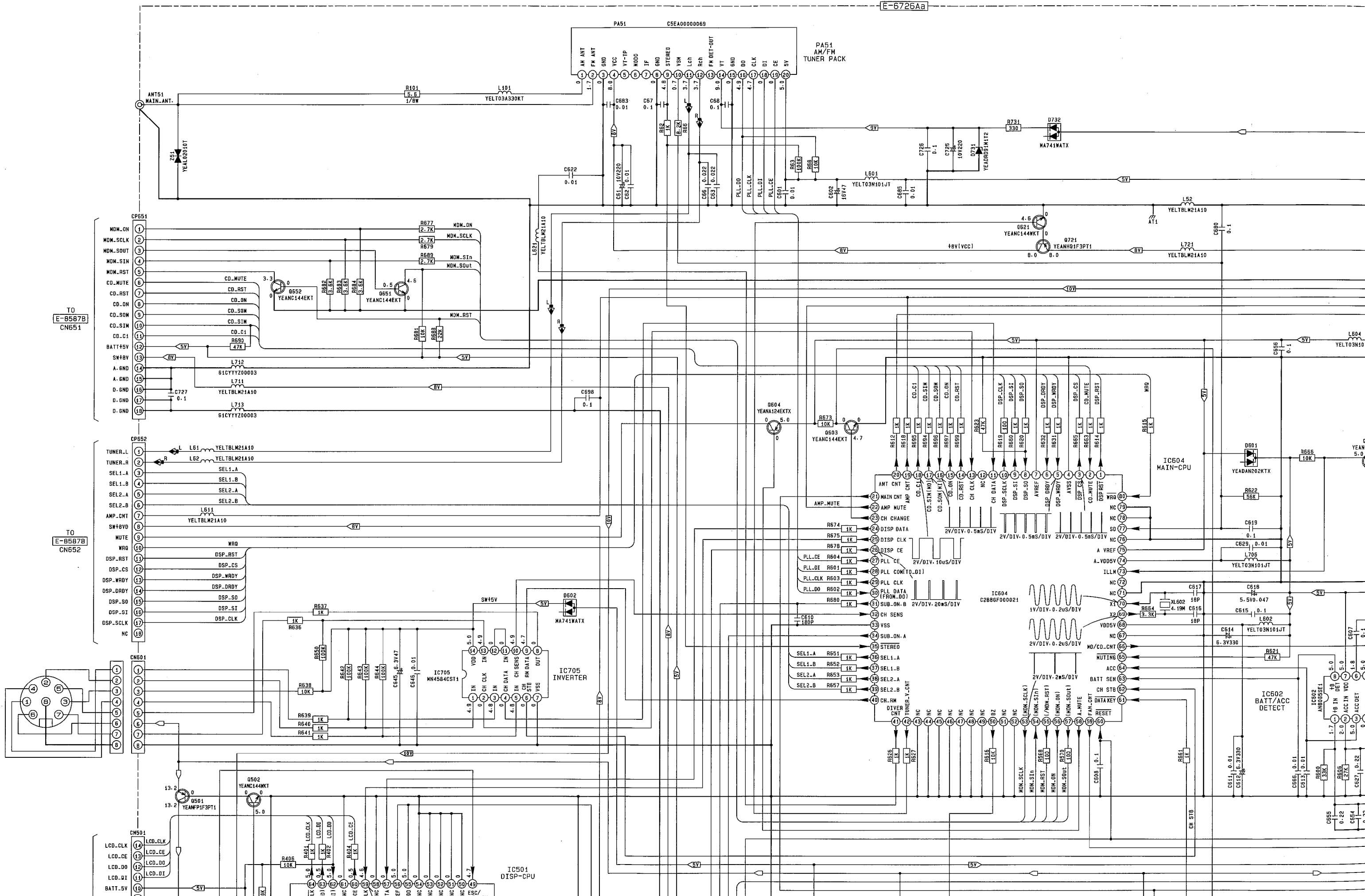


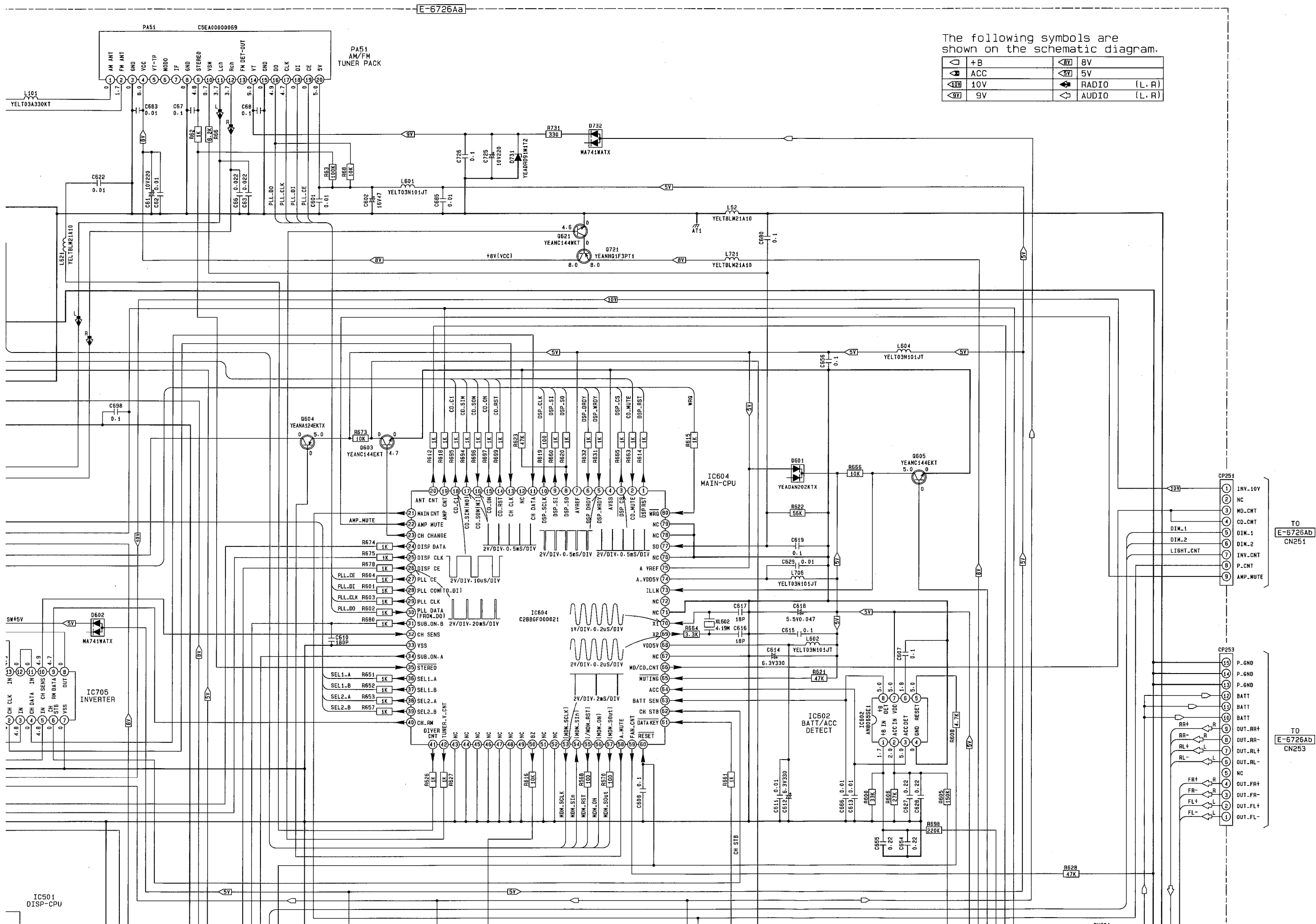


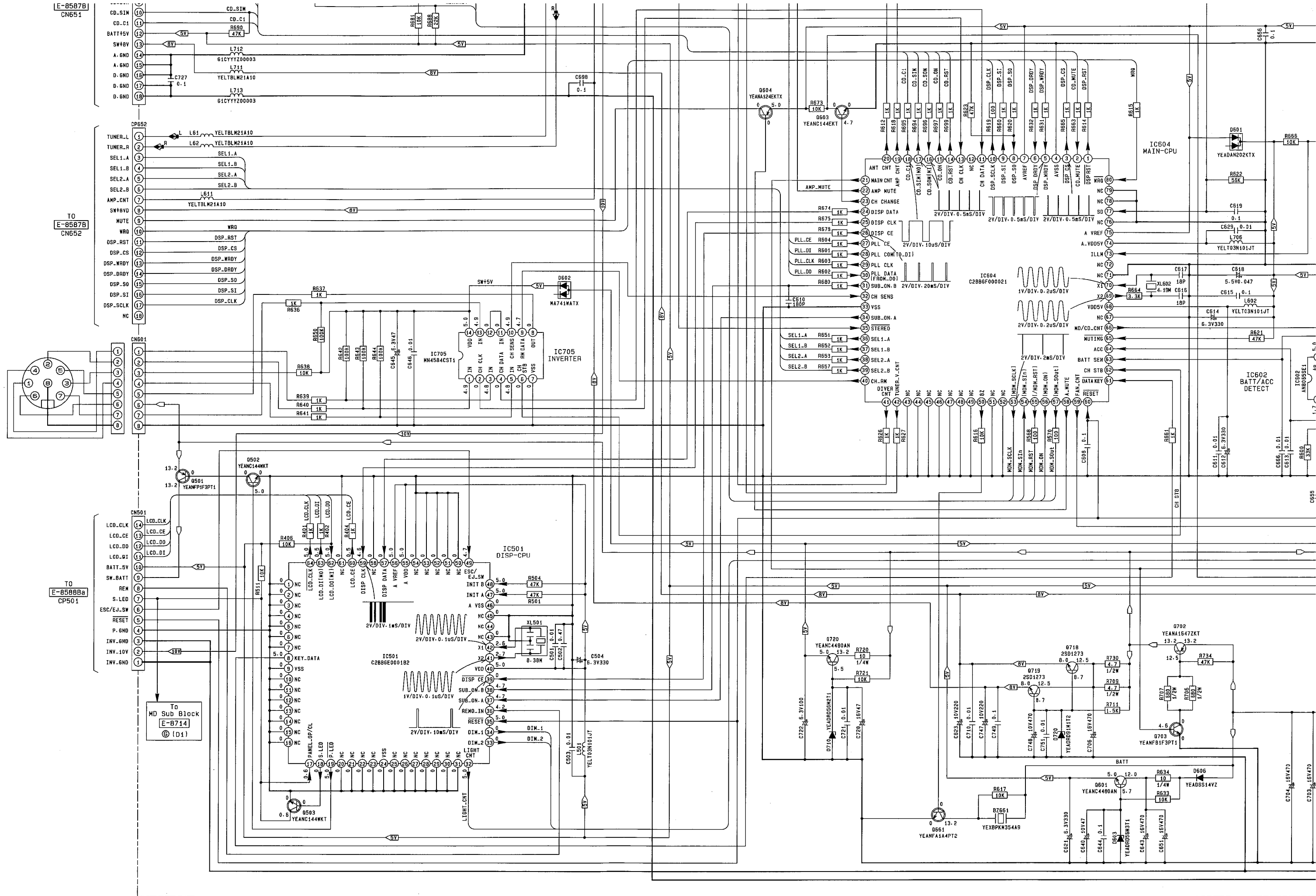


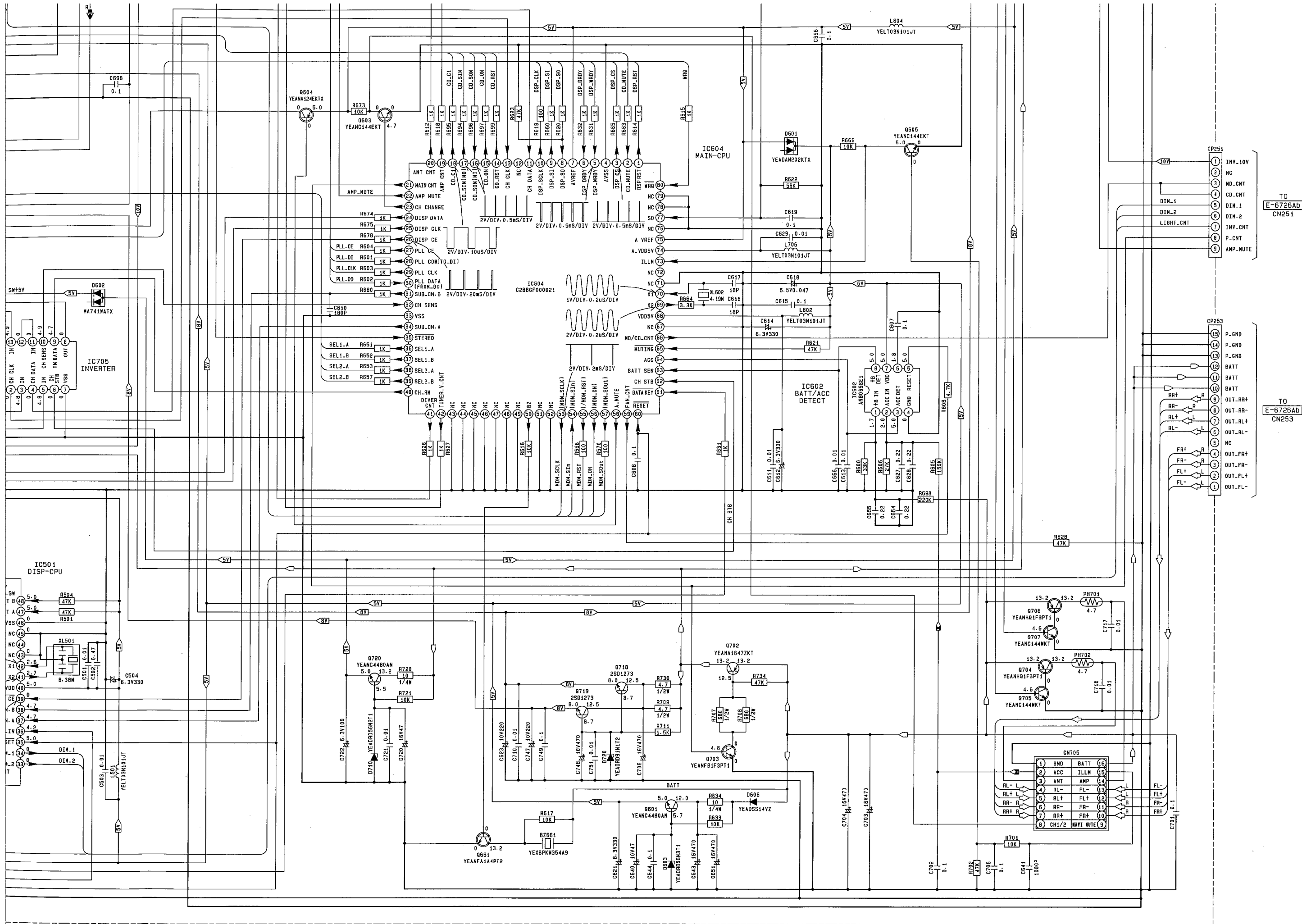


SCHEMATIC DIAGRAM (Main Block)

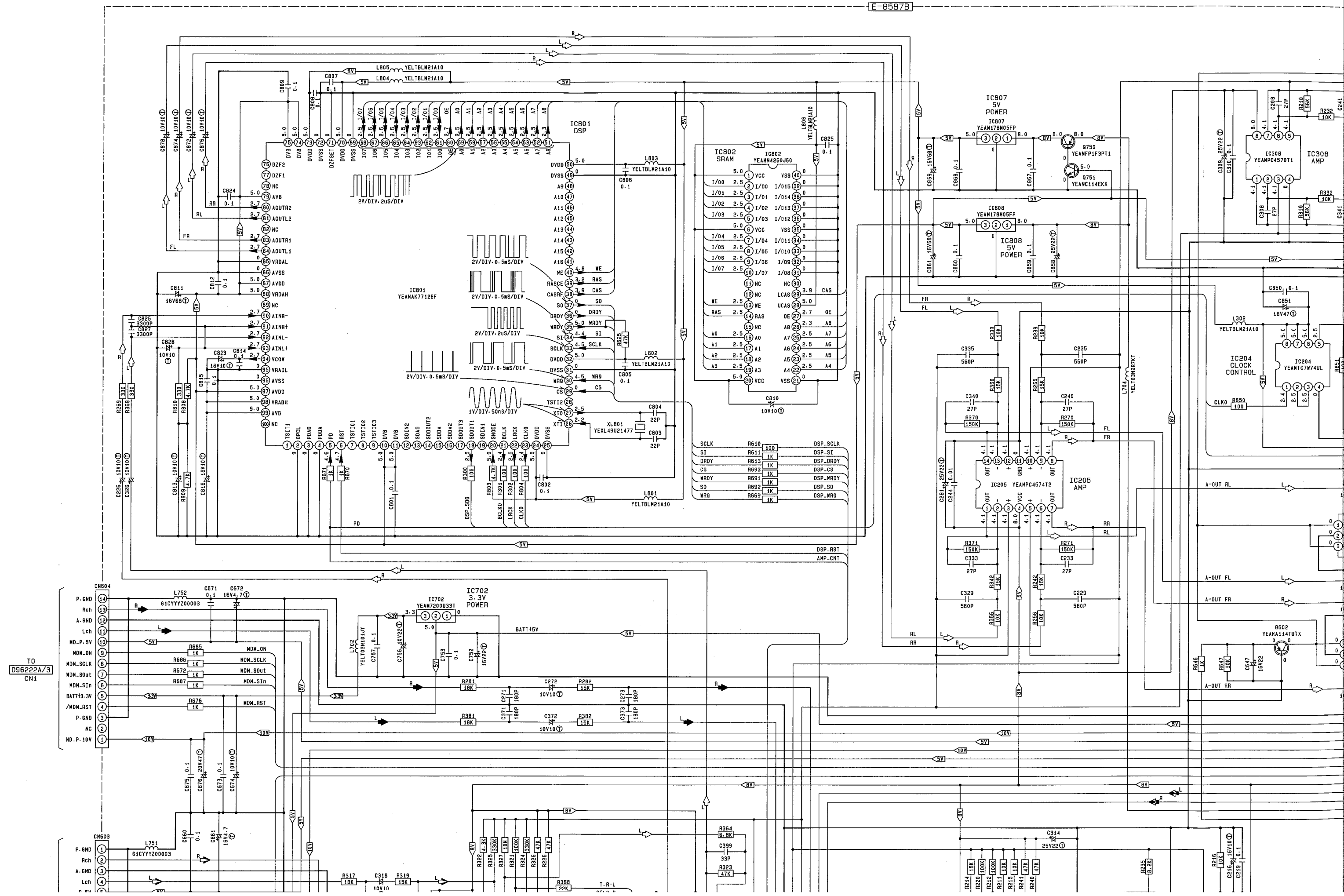


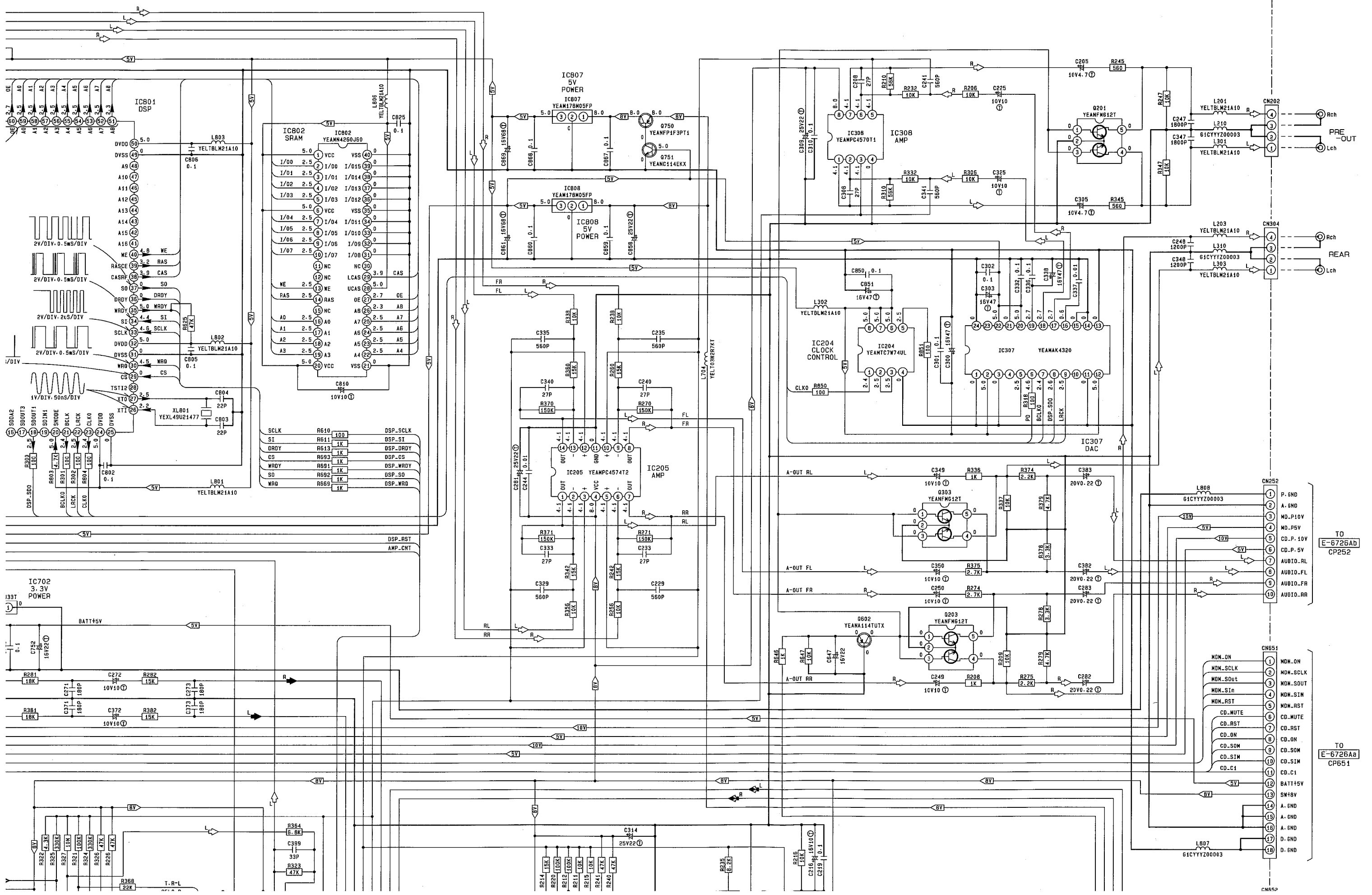


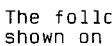


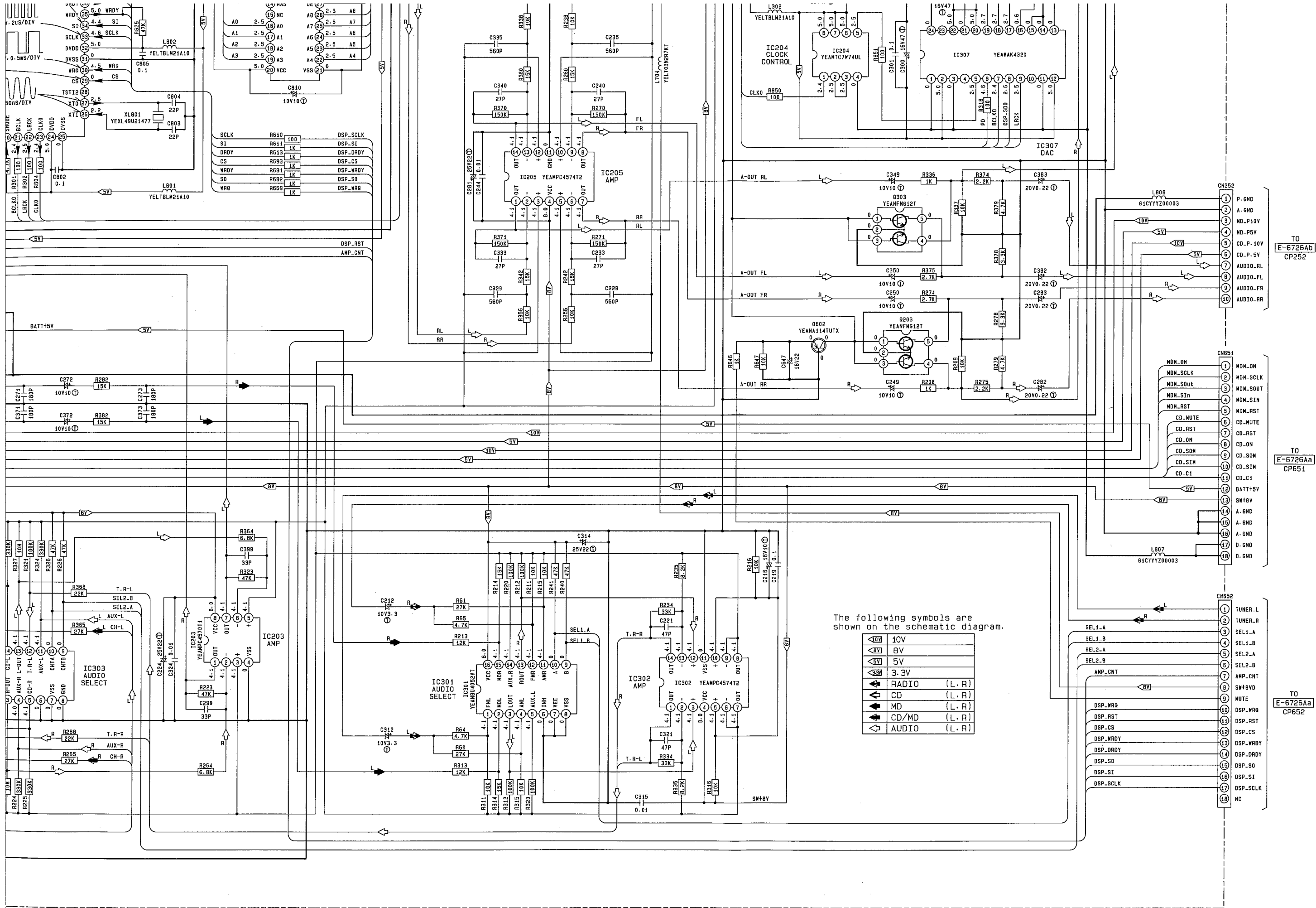


SCHEMATIC DIAGRAM (DSP Block)



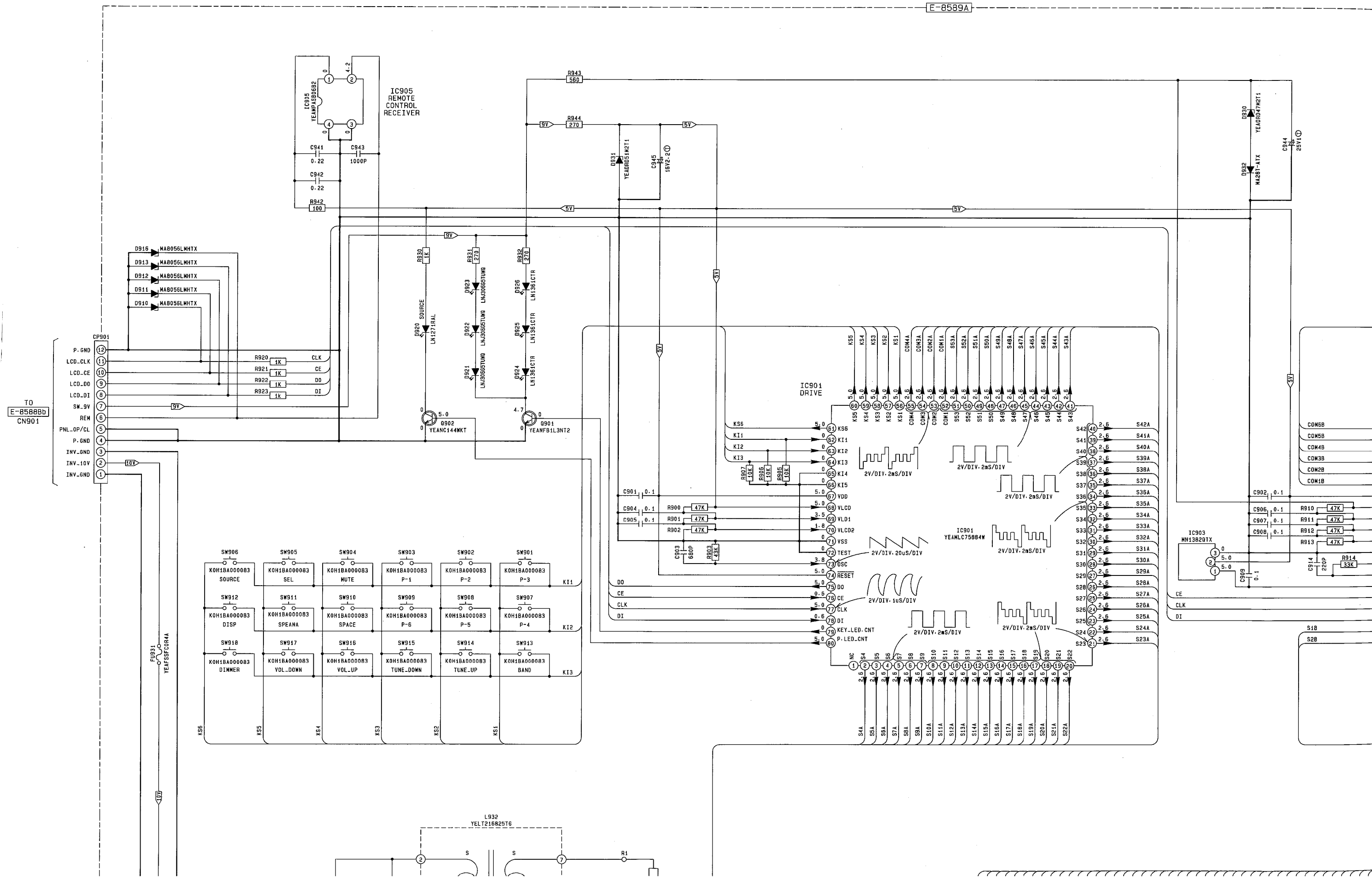


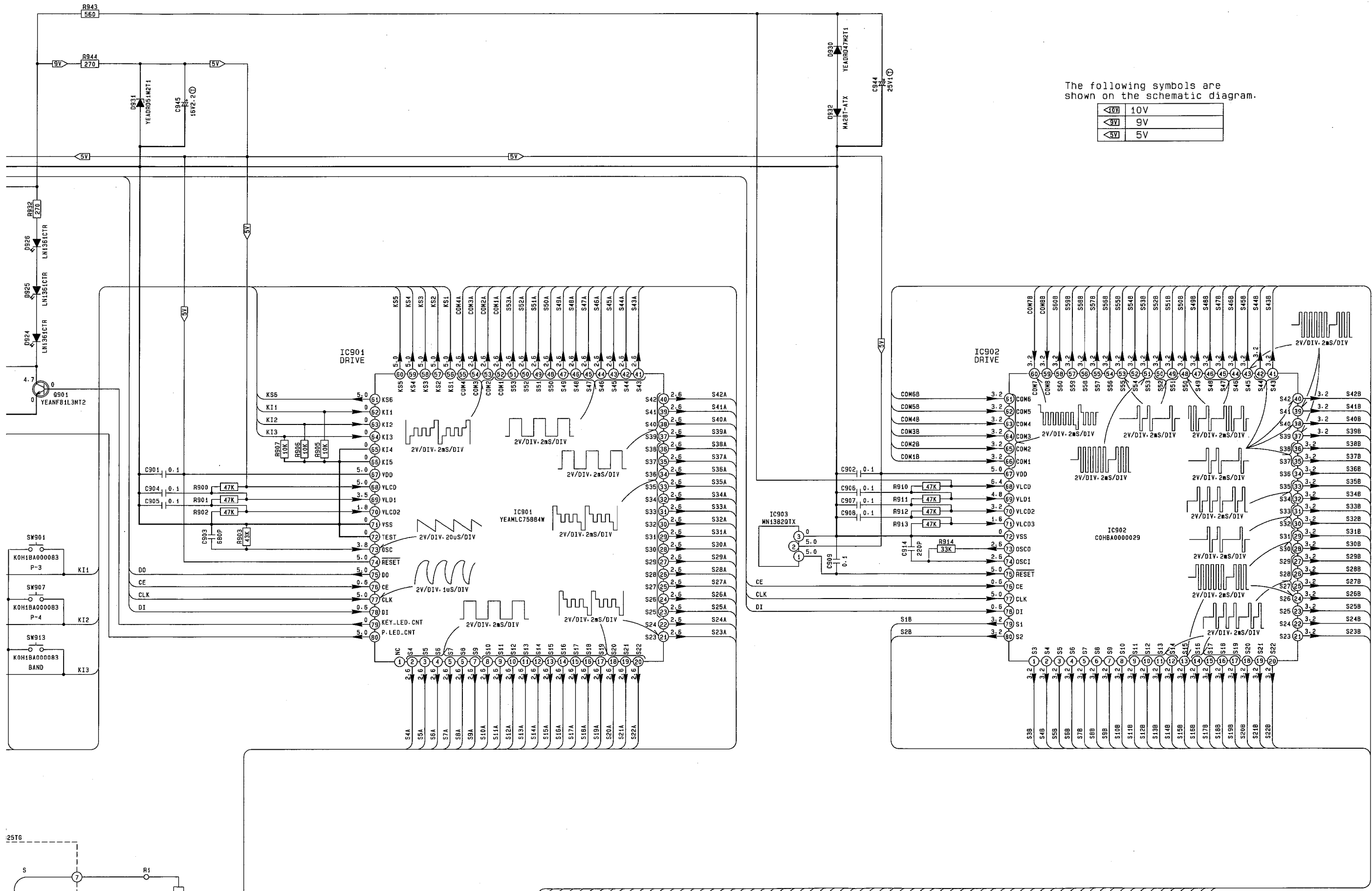


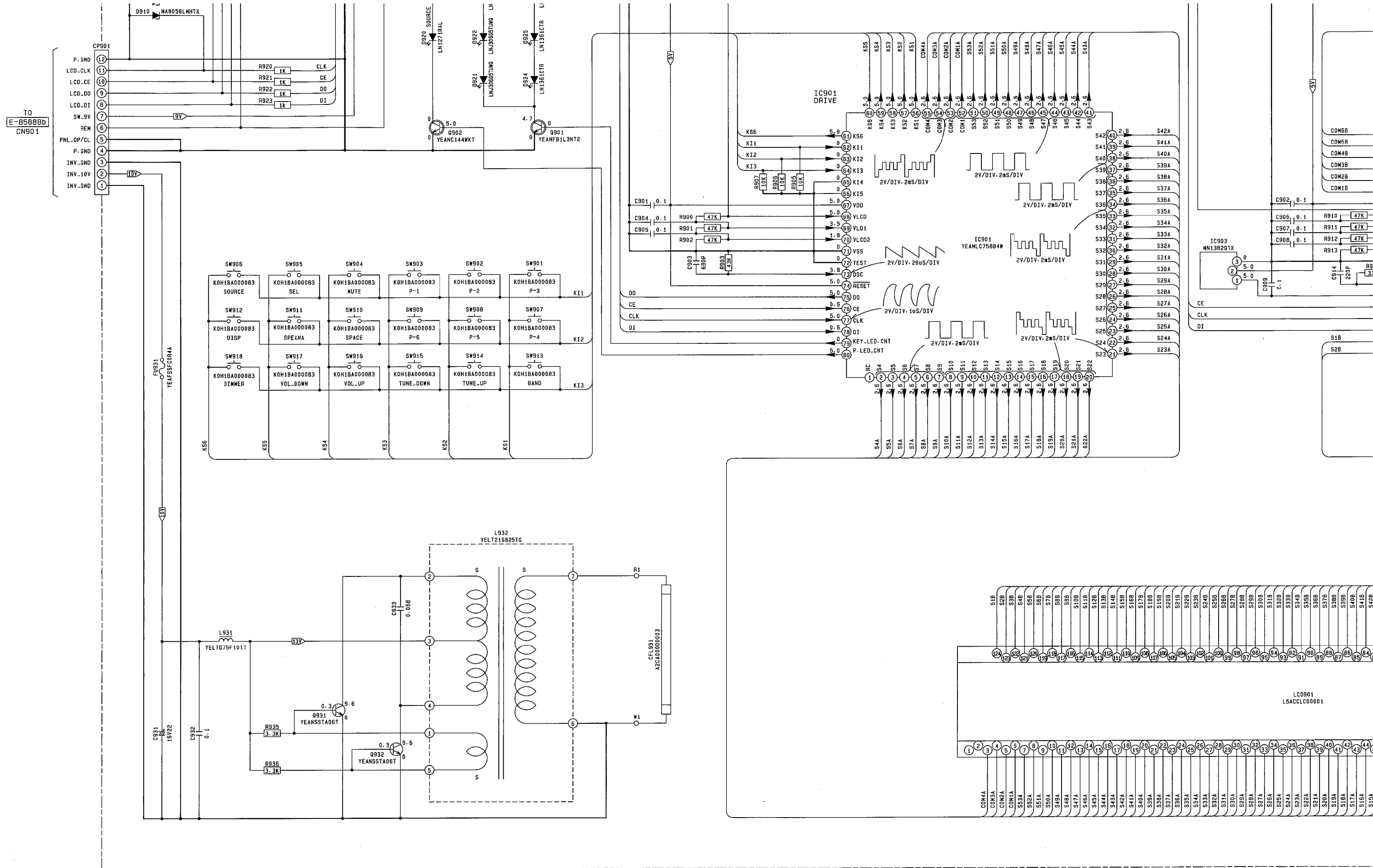


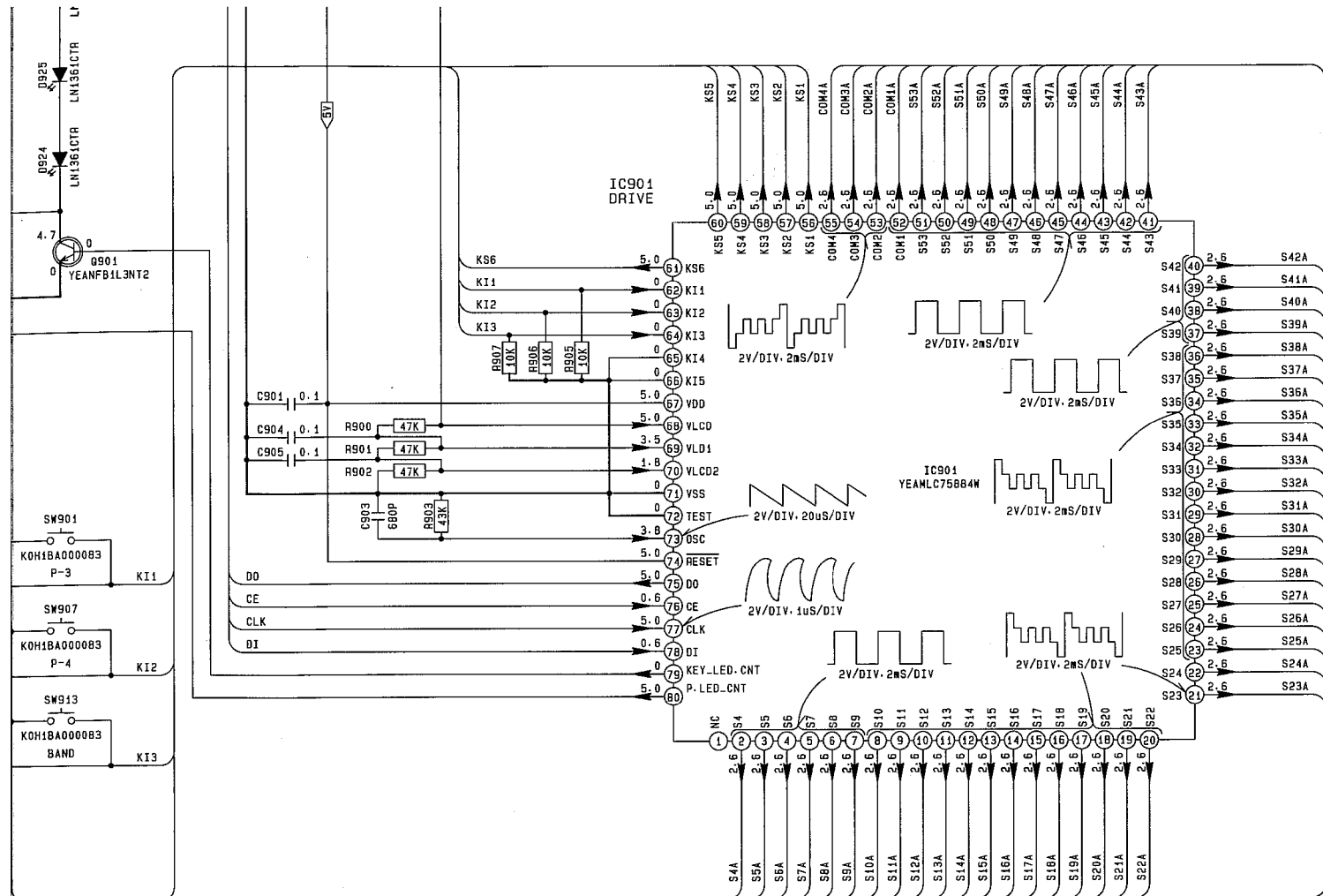


E-8589A

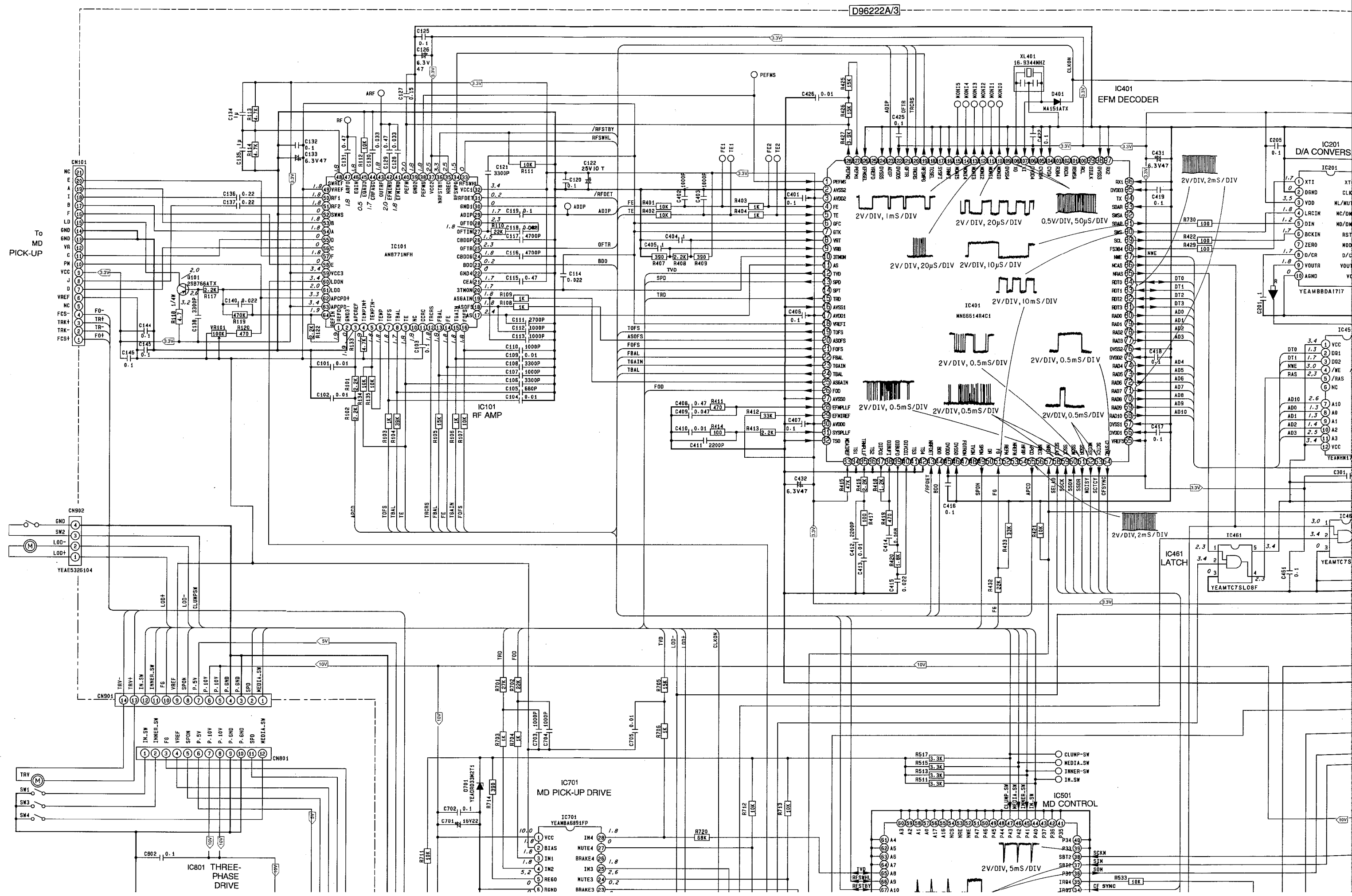




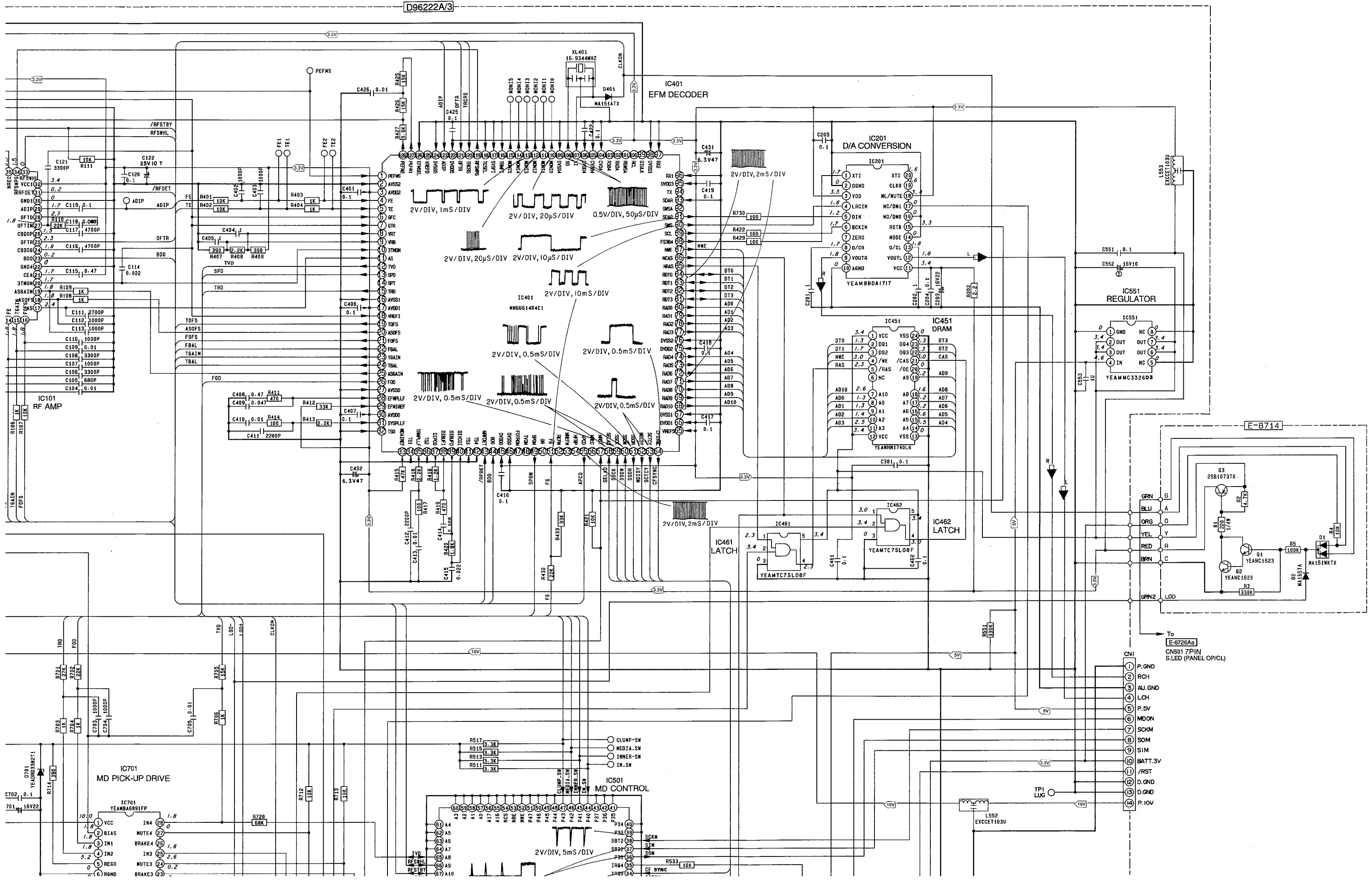


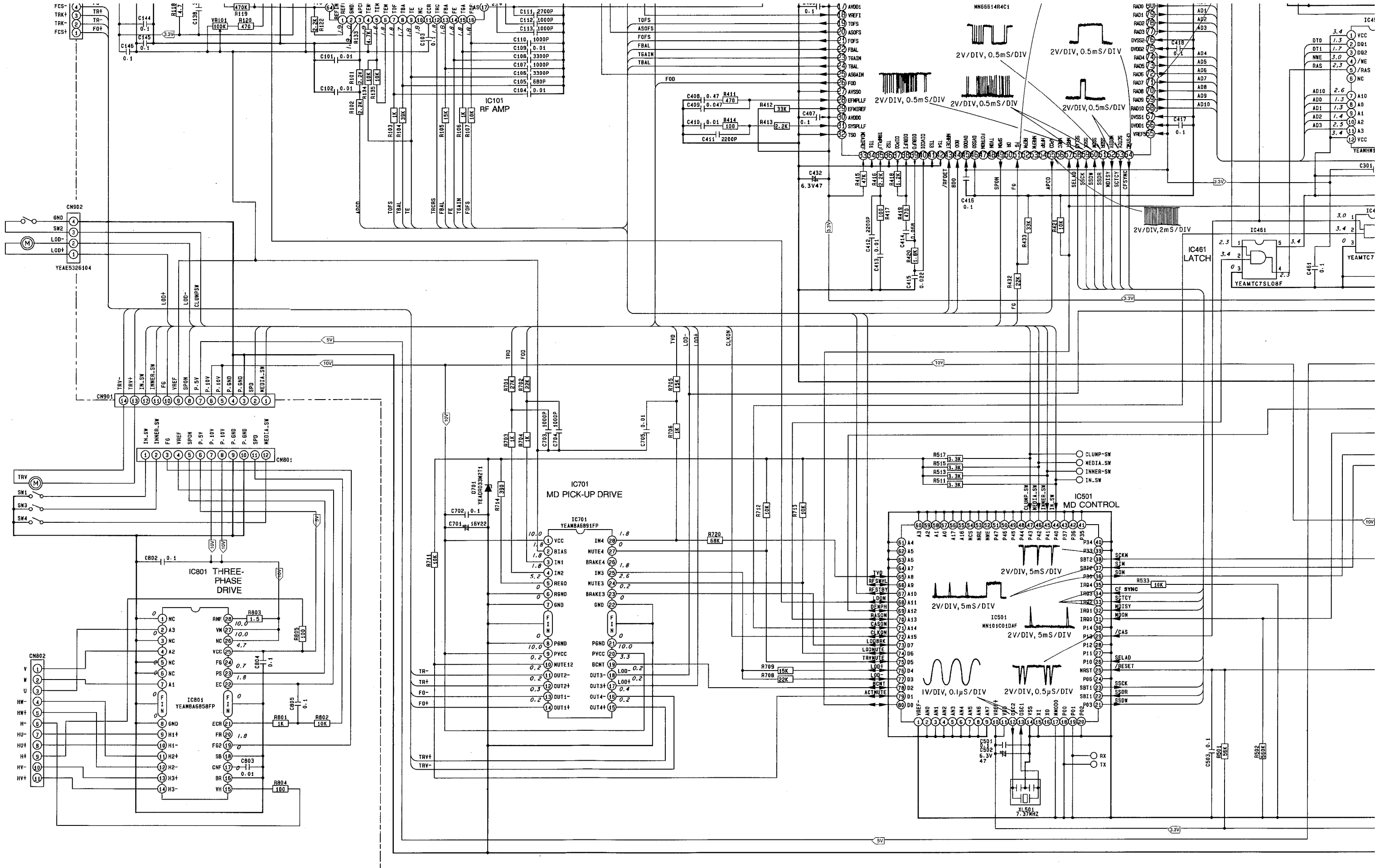


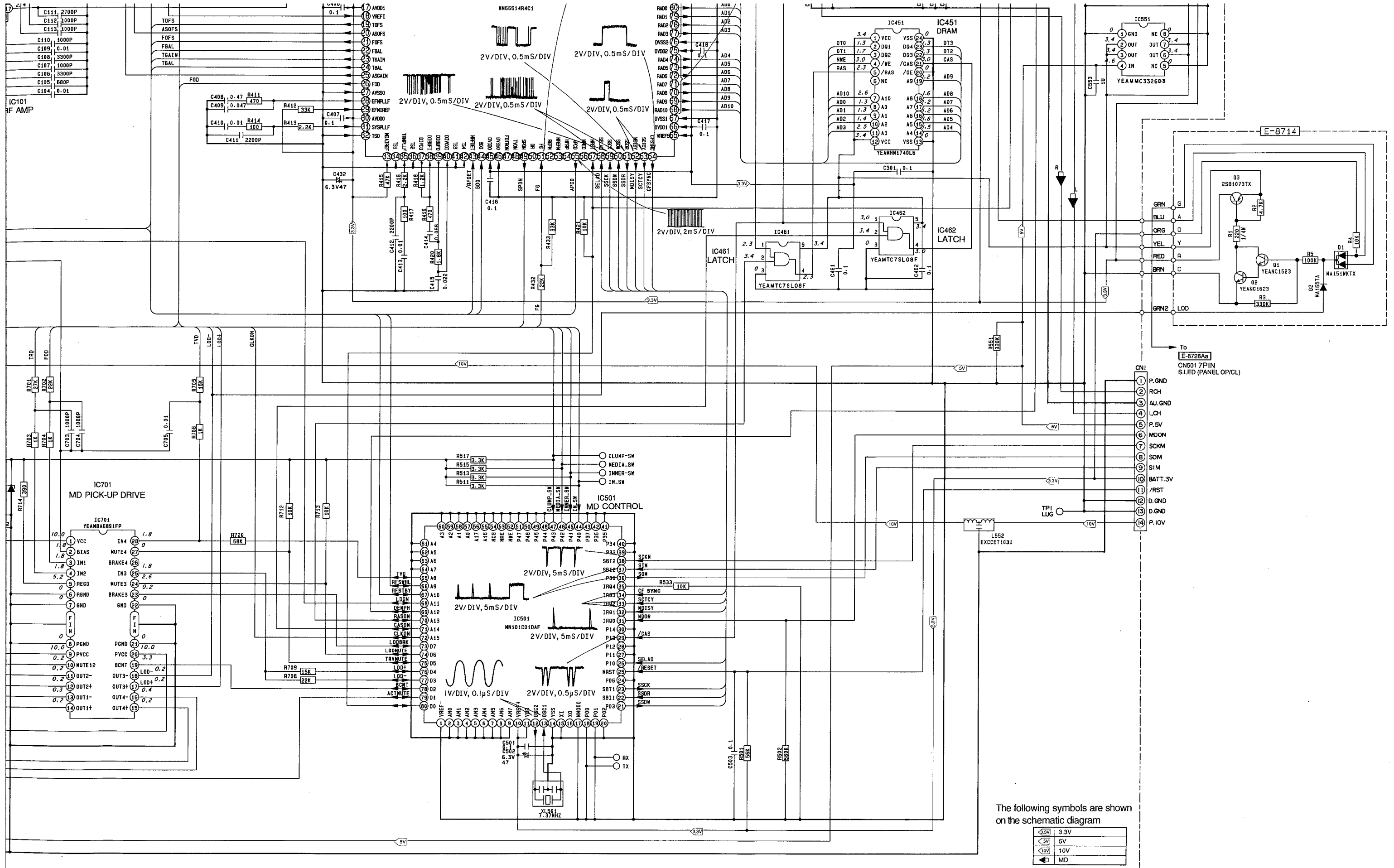
SCHEMATIC DIAGRAM (MD Servo Block)



D96222A/3

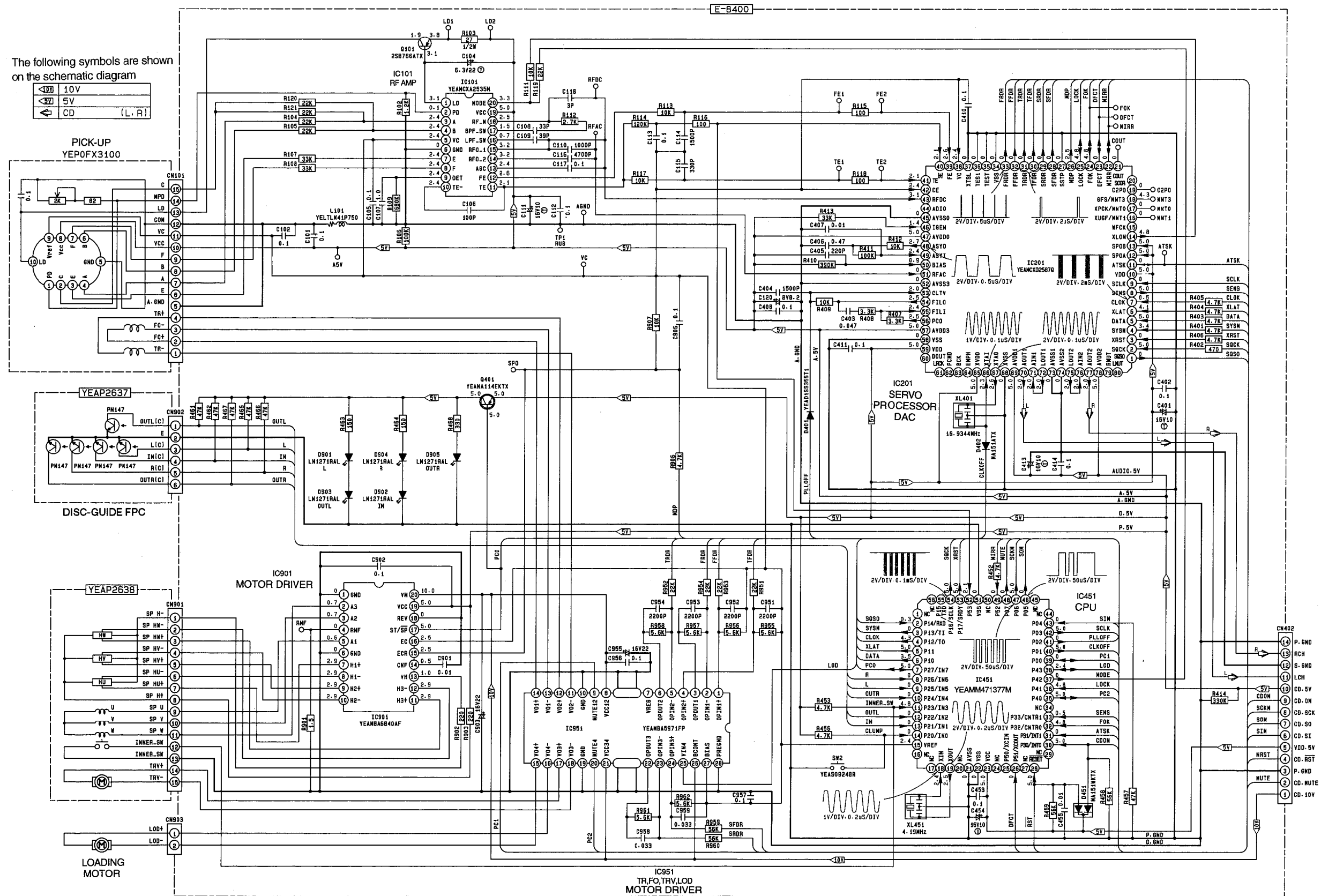








### SCHEMATIC DIAGRAM (CD Servo Block)



## TERMINALS DESCRIPTION (Main Block)

## ■ IC501 G2BBGE000182

| Pin No. | Name        | Description                   | I/O | Vol. (V) |
|---------|-------------|-------------------------------|-----|----------|
| 1       | (NC)        | —                             | —   | —        |
| 2       | (NC)        | —                             | —   | —        |
| 3       | (NC)        | —                             | —   | —        |
| 4       | (NC)        | —                             | —   | —        |
| 5       | (NC)        | —                             | —   | —        |
| 6       | (NC)        | —                             | —   | —        |
| 7       | (NC)        | —                             | —   | —        |
| 8       | (NC)        | —                             | —   | —        |
| 9       | VSS         | Connect to Ground             | —   | 0        |
| 10      | (NC)        | —                             | —   | —        |
| 11      | (NC)        | —                             | —   | —        |
| 12      | (NC)        | —                             | —   | —        |
| 13      | (NC)        | —                             | —   | —        |
| 14      | (NC)        | —                             | —   | —        |
| 15      | (NC)        | —                             | —   | —        |
| 16      | (NC)        | —                             | —   | —        |
| 17      | PANEL OP/CL | Front Panel Open/Close Detect | I   | 0.8      |
| 18      | S. LED      | S.LED Signal                  | O   | 0        |
| 19      | P. LED      | Panel Display Power Control   | O   | 4.8      |
| 20      | (NC)        | —                             | —   | —        |
| 21      | (NC)        | —                             | —   | —        |
| 22      | (NC)        | —                             | —   | —        |
| 23      | (NC)        | —                             | —   | —        |
| 24      | VSS         | Connect to Ground             | —   | 0        |
| 25      | (NC)        | —                             | —   | —        |
| 26      | (NC)        | —                             | —   | —        |
| 27      | (NC)        | —                             | —   | —        |
| 28      | (NC)        | —                             | —   | —        |
| 29      | (NC)        | —                             | —   | —        |
| 30      | (NC)        | —                             | —   | —        |
| 31      | (NC)        | —                             | —   | —        |
| 32      | LIGHT CNT   | Panel Light Power             | O   | 4.8      |
| 33      | DIM1        | Dimmer 1                      | O   | 0        |
| 34      | DIM2        | Dimmer 2                      | O   | 0        |
| 35      | RESET       | System Reset                  | I   | 5.0      |
| 36      | REMO IN     | Remote Data                   | I   | 4.6      |
| 37      | SUB ON A    | Chip Enable (from Main CPU)   | I   | 4.9      |
| 38      | SUB ON B    | Sub ON (from Main CPU)        | I   | 4.8      |
| 39      | DISP CE     | Display Chip Enable           | I   | 5.0      |
| 40      | VDD         | Connect to VDD5V              | —   | 5.0      |
| 41      | X2          | Main System Clock (8.38MHz)   | O   | 2.7      |
| 42      | X1          | Main System Clock (8.38MHz)   | I   | 2.4      |
| 43      | (NC)        | —                             | —   | —        |
| 44      | NC(OPEN)    | —                             | —   | —        |
| 45      | (NC)        | —                             | —   | —        |
| 46      | AVSS        | Connect to ground             | —   | 0        |
| 47      | INIT A      | Function Select A             | I   | 5.0      |
| 48      | INIT B      | Function Select B             | I   | 5.0      |
| 49      | ESC/EJ SW   | Escusion Remove/Eject SW      | I   | 4.8      |
| 50      | (NC)        | —                             | —   | —        |
| 51      | (NC)        | —                             | —   | —        |
| 52      | (NC)        | —                             | —   | —        |
| 53      | (NC)        | —                             | —   | —        |
| 54      | (NC)        | —                             | —   | —        |
| 55      | AVDD        | Connect to VDD5V              | —   | 5.0      |
| 56      | AVREF0      | Connect to SW5V               | —   | 5.0      |
| 57      | DISP DATA   | Display Data                  | I   | 0        |
| 58      | (NC)        | —                             | —   | —        |
| 59      | DISP CLK    | Display Clock                 | I   | 5.0      |
| 60      | LCD CE      | LCD Chip Enable               | O   | 0        |
| 61      | (NC)        | —                             | —   | —        |
| 62      | LCD DO      | LCD Data Input                | I   | 4.9      |
| 63      | LCD DI      | LCD Data Output               | O   | 0        |
| 64      | LCD CLK     | LCD Clock                     | O   | 0        |

## ■ IC604 C2BBGF000021

| Pin No. | Name        | Description                            | I/O | Vol. (V)        |
|---------|-------------|--|-----|-----------------|
| 1       | DSP RST     | DSP Reset Output                       | O   | 5.3 5.3 5.3 5.3 |
| 2       | CD MUTE     | CD Mute                                | I   | 0 0 0 0         |
| 3       | DSP CS      | DSP Chip Select Output                 | O   | 0 0 0 0         |
| 4       | AVSS        | Connect to Ground (for A/D Converter)  | —   | 0 0 0 0         |
| 5       | DSP WRDY    | DSP Write Ready                        | I   | 4.9 4.9 4.9 4.9 |
| 6       | DSP DRDY    | DSP Read Ready                         | I   | 0 0 0 0         |
| 7       | AVREF       | Connect to SW5V (for A/D Converter)    | I   | 5.1 5.1 5.1 5.1 |
| 8       | DSP SO      | DSP Data Input                         | I   | 4.5 4.5 4.5 4.5 |
| 9       | DSP SI      | DSP Data Output                        | O   | 5 5 5 5         |
| 10      | DSP CLK     | DSP Clock                              | O   | 5.3 5.3 5.3 5.3 |
| 11      | CH DATA     | CD/MD Changer Data Input               | I   | 0 0 0 0         |
| 12      | (NC)        | —                                      | —   | —               |
| 13      | CH CLK      | CD/MD Changer Clock Input              | I   | 0 0 0 0         |
| 14      | CD RST      | CD CPU Reset Output                    | O   | 5.3 5.3 5.3 5.3 |
| 15      | CD ON       | CD ON Signal                           | O   | 5.3 5.3 0 5.3   |
| 16      | CD SOM      | CD CPU Serial Data Input               | I   | 0 0 0 0         |
| 17      | CD SIM      | CD CPU Serial Data Output              | O   | 0 0 0 0         |
| 18      | CD C1       | CD CPU Clock                           | O   | 5.3 5.3 5.3 5.3 |
| 19      | AMP CNT     | Ext Power AMP Control / DSP Reset      | O   | 5.3 5.3 5.3 5.3 |
| 20      | ANT CNT     | Motor Antenna Control Output           | O   | 5.3 5.3 0 0     |
| 21      | MAIN CNT    | Main Power Control Output              | O   | 5.3 5.3 5.3 5.3 |
| 22      | AMP MUTE    | Power Amp Mute Output                  | O   | 0 0 0 0         |
| 23      | CH CHANGE   | Twin-Changer Control Output            | O   | 5.3 5.3 5.3 5.3 |
| 24      | DISP DATA   | Display CPU Data Output                | O   | 0 0 0 0         |
| 25      | DISP CLK    | Display CPU Clock                      | O   | 5.2 5.2 5.2 5.2 |
| 26      | DISP CE     | Display CPU Chip Enable                | O   | 5.2 5.2 5.2 5.2 |
| 27      | PLL CE      | PLL Chip Enable                        | O   | 0.7 0 0 0       |
| 28      | PLL COM     | PLL Data Output                        | O   | 0.7 0 0 0       |
| 29      | PLL CLK     | PLL Clock Output                       | O   | 0.4 0 0 0       |
| 30      | PLL DATA    | PLL Data Input                         | I   | 3.8 3.8 0 0     |
| 31      | SUB ON      | Display CPU ON Signal                  | O   | 5.3 5.3 5.3 5.3 |
| 32      | CH SENS     | Twin-Changer Detect Signal Input       | I   | 5.0 5.0 5.0 5.0 |
| 33      | VSS         | Connect to Ground                      | —   | 0 0 0 0         |
| 34      | SUB ON A    | Sub CPU Chip Enable                    | O   | 4.9 4.9 4.9 4.9 |
| 35      | STEREO      | Radio Stereo Detect Signal Input       | I   | 4.9 4.9 0 0     |
| 36      | SEL1-A      | Audio Select IC Control Signal A (IC1) | O   | 8.0 0 0 0       |
| 37      | SEL1-B      | Audio Select IC Control Signal B (IC1) | O   | 8.0 0 0 8.0     |
| 38      | SEL2-A      | Audio Select IC Control Signal A (IC2) | O   | 0 8.0 8.0 0     |
| 39      | SEL2-B      | Audio Select IC Control Signal B (IC2) | O   | 0 0 0 0         |
| 40      | CH RM       | CD/MD Changer Remote Control           | O   | 5.3 5.3 5.3 5.3 |
| 41      | DIVER CNT   | TV Diversity Control                   | O   | 0 0 0 0         |
| 42      | TUNER V CNT | Tuner Pack Power Control               | O   | 5.3 5.3 0 0     |
| 43      | (NC)        | —                                      | —   | —               |
| 44      | (NC)        | —                                      | —   | —               |
| 45      | (NC)        | —                                      | —   | —               |
| 46      | (NC)        | —                                      | —   | —               |
| 47      | (NC)        | —                                      | —   | —               |
| 48      | (NC)        | —                                      | —   | —               |
| 49      | (NC)        | —                                      | —   | —               |
| 50      | BUZ         | Buzzer Output                          | O   | 0 0 0 0         |
| 51      | (NC)        | —                                      | —   | —               |
| 52      | (NC)        | —                                      | —   | —               |
| 53      | MDM SCLK    | MD CPU Clock                           | O   | 5.3 5.3 5.3 5.3 |
| 54      | MDM SIN     | MD CPU Data Input                      | I   | 0 0 0 0         |
| 55      | MDM RST     | MD CPU Reset Signal                    | O   | 0 0 0 0         |
| 56      | MDM ON      | MD Mechanism Eject Signal              | O   | 5.3 0 0 5.3     |
| 57      | MDM SOUT    | MD CPU Data                            | O   | 4.4 5.5 5.5 4.0 |
| 58      | A-MUTE      | Mute Control                           | O   | 5.3 5.3 5.3 5.3 |
| 59      | FAN CNT     | Cooling Fan Control                    | O   | 5.3 5.3 5.3 5.3 |
| 60      | RESET       | System Reset                           | I   | 5.3 5.3 5.3 5.3 |
| 61      | DATA KEY    | KEY Data Input                         | I   | 5.5 5.5 5.5 5.5 |
| 62      | CH STB      | CD/MD Changer Strobe Signal            | I   | 0 0 0 0         |
| 63      | BATT SEN    | Battery Voltage Detect                 | I   | 5.0 5.0 5.0 5.0 |
| 64      | ACC         | ACC Voltage Detect                     | I   | 5.0 5.0 5.0 5.0 |
| 65      | MUTING      | Mute Signal                            | I   | 5.2 5.2 5.2 5.2 |
| 66      | MD/CD CNT   | MD/CD Control                          | O   | 0 0 5.3 5.3     |
| 67      | (NC)        | —                                      | —   | —               |
| 68      | VDD 5V      | Connect to VDD5V                       | —   | 5.3 5.3 5.3 5.3 |
| 69      | X2          | System Clock (4.19MHz)                 | O   | 2.9 2.9 2.9 2.9 |
| 70      | X1          | System Clock (4.19MHz)                 | I   | 2.2 2.2 2.2 2.2 |
| 71      | (NC)        | —                                      | —   | —               |
| 72      | (NC)        | —                                      | —   | —               |
| 73      | ILLM        | Illumination Input                     | I   | 5.0 5.0 5.0 5.0 |
| 74      | A VDD5V     | Connect to VDD5V                       | —   | 5.5 5.5 5.5 5.5 |
| 75      | A VREF      | Connect to SW5V                        | —   | 5.0 5.0 5.0 5.0 |
| 76      | (NC)        | —                                      | —   | —               |
| 77      | SD          | Radio Signal Strength Input            | I   | 0.7 0.2 0 0     |
| 78      | (NC)        | —                                      | —   | —               |
| 79      | (NC)        | —                                      | —   | —               |
| 80      | WRQ         | DSP                                    | I   | 5.1 5.1 5.1 5.1 |

## TERMINALS DESCRIPTION (DSP Block)

## ■ IC801 YEAMAK7712BF

| Pin No. | Name         | Description  | I/O | Vol. (V)        |
|---------|--------------|--|-----|-----------------|
| 1       | TST11(NC)    | —  | —   | —               |
| 2       | OPCL         | A/D, D/A Converter L:Connect                               | I   | 0 0 0 0         |
| 3       | PDAD         | A/D Reset  | I   | 0 0 0 0         |
| 4       | PDDA         | D/A Reset  | I   | 0 0 0 0         |
| 5       | PD           | Power Down   | I   | 5.0 5.0 5.0 5.0 |
| 6       | RST          | Reset Input  | I   | 5.0 5.0 5.0 5.0 |
| 7       | TST101 (NC)  | —  | —   | —               |
| 8       | TST102 (NC)  | —  | —   | —               |
| 9       | TST103 (NC)  | —  | —   | —               |
| 10, 11  | DVB          | Power Supply (for Digital)                                 | —   | 5.0 5.0 5.0 5.0 |
| 12      | SDIN2 (NC)   | —  | —   | —               |
| 13      | SDAD (NC)    | —  | —   | —               |
| 14      | SDOUT2 (NC)  | —  | —   | —               |
| 15      | SDDA (NC)    | —  | —   | —               |
| 16      | SDDA2 (NC)   | —  | —   | —               |
| 17      | SDOUT3 (NC)  | —  | —   | —               |
| 18      | SDOUT1       | DSP Data   | O   | 2.5 2.5 2.5 2.5 |
| 19      | SDIN1 (NC)   | —  | —   | —               |
| 20      | SMODE        | Interface Clock Select                                     | I   | 4.9 4.9 4.9 4.9 |
| 21      | BCLK         | DSP B Clock  | O   | 2.5 2.5 2.5 2.5 |
| 22      | LRCK         | DSP LR Clock   | O   | 2.5 2.5 2.5 2.5 |
| 23      | CLK0         | DSP Clock  | O   | 2.5 2.5 2.5 2.5 |
| 24      | DVDD         | Connect to +5V   | —   | 4.9 4.9 4.9 4.9 |
| 25      | DVSS         | Connect to Ground (for Digital)                            | —   | 0 0 0 0         |
| 26      | XTI          | X-tal  | I   | 2.2 2.2 2.2 2.2 |
| 27      | XTO          | X-tal  | O   | 2.3 2.3 2.3 2.3 |
| 28      | TST12        | CLK0 (23Pin) Output Control<br>L or Open: Enable H: CLK0=L | I   | 4.8 4.8 4.8 4.8 |
| 29      | CS           | Chip Select  | I   | 4.8 0 0 0       |
| 30      | WRQ          | Command Register Reset                                     | I   | 0 4.9 4.9 4.9   |
| 31      | DVSS         | Connect to Ground (for Digital)                            | —   | 0 0 0 0         |
| 32      | DVDD         | Connect to +5V (for Digital)                               | —   | 4.9 4.9 4.9 4.9 |
| 33      | SCLK         | Serial Data Clock  | I   | 4.9 5.0 5.0 5.0 |
| 34      | SI           | Serial Data Input  | I   | 4.9 4.9 4.9 4.9 |
| 35      | WRDY         | Write Ready<br>CS=H: Hi-Z                                  | O   | 4.9 4.9 4.9 4.9 |
| 36      | DRDY         | Data Ready Output  | O   | 0 0 0 0         |
| 37      | SO           | Serial Data Output<br>CS=H: Hi-Z                           | O   | 4.6 4.6 4.6 4.6 |
| 38      | CASRF        | DRAM Refresh   | O   | 3.6 3.6 3.6 3.6 |
| 39      | RASCE        | DRAM Refresh   | O   | 3.0 3.0 3.0 3.0 |
| 40      | WE           | Wright Enable  | O   | 4.6 4.6 4.6 4.6 |
| 41A' 48 | A16A' A9(NC) | —  | —   | —               |
| 49      | DVSS         | Connect to Ground (for Digital)                            | —   | 0 0 0 0         |
| 50      | DVDD         | Connect to +5V (for Digital)                               | —   | 4.9 4.9 4.9 4.9 |

| Pin No. | Name      | Description   | I/O | Vol. (V)        |
|---------|-----------|---|-----|-----------------|
| 51      | A8        | Address 8   | O   | 2.3 2.4 2.2 2.2 |
| 52      | A7        | Address 7   | O   | 2.5 2.4 2.4 2.5 |
| 53      | A6        | Address 6   | O   | 2.5 2.4 2.4 2.4 |
| 54      | A5        | Address 5   | O   | 2.5 2.4 2.4 2.4 |
| 55      | A4        | Address 4   | O   | 2.5 2.4 2.4 2.4 |
| 56      | A3        | Address 3   | O   | 2.5 2.4 2.4 2.4 |
| 57      | A2        | Address 2   | O   | 2.5 2.4 2.4 2.4 |
| 58      | A1        | Address 1   | O   | 2.5 2.4 2.4 2.4 |
| 59      | A0        | Address 0   | O   | 4.1 2.4 4.1 4.0 |
| 60      | OE        | Output Enable<br>(for Ext SRAM)                       | O   | 2.3 2.1 2.2 2.1 |
| 61 - 68 | IO0 - IO7 | Data I/O  | I/O | 2.3 2.5 2.4 2.4 |
| 69      | DVSS      | Connect to Ground (for Dgial)                         | —   | 0 0 0 0         |
| 70      | DVDD      | Connect to +5V (for Digital)                          | —   | 4.9 4.9 4.9 4.9 |
| 71      | DZFSET    | Zero Point Detect<br>L: DZF=Enable, H: DZF Output = L | I   | 0 0 0 0         |
| 72      | DVSS      | Connect to Ground (for Digital)                       | —   | 0 0 0 0         |
| 73      | DVDD      | Connect to +5V (for Digital)                          | —   | 4.9 4.9 4.9 4.9 |
| 74,75   | DVB       | Connect to +5V (for Digital)                          | —   | 5.0 5.0 5.0 5.0 |
| 76      | DZF2(NC)  | —   | —   | —               |
| 77      | DZF1(NC)  | —   | —   | —               |
| 78      | (NC)      | —   | —   | —               |
| 79      | AVB       | Connect to +5V (for Analog)                           | —   | 5.0 5.0 5.0 5.0 |
| 80      | AOCTR2    | D/A Converter Analog Output2 (R ch)                   | O   | 2.4 2.4 2.4 2.4 |
| 81      | AOCTL2    | D/A Converter Analog Output2 (L ch)                   | O   | 2.4 2.4 2.5 2.4 |
| 82      | (NC)      | —   | —   | —               |
| 83      | AOCTR1    | D/A Converter Analog Output1 (R ch)                   | O   | 2.4 2.4 2.5 2.4 |
| 84      | AOCTL1    | D/A Converter Analog Output1 (L ch)                   | O   | 2.4 2.4 2.5 2.4 |
| 85      | VRDAL     | Connect to Ground (for D/A Converter)                 | I   | 0 0 0 0         |
| 86      | AVSS      | Connect to Ground (Analog Ground)                     | —   | 0 0 0 0         |
| 87      | AVDD      | Connect to Ground (Analog Power)                      | —   | 5.0 5.0 5.0 5.0 |
| 88      | VRDAH     | Connect to +5V (for D/A Converter)                    | I   | 5.0 5.0 5.0 5.0 |
| 89      | (NC)      | —   | —   | —               |
| 90      | AINR-     | A/D Converter Analog Input (Rch, -)                   | I   | 2.4 2.4 2.4 2.4 |
| 91      | AINR+     | A/D Converter Analog Input (Rch, +)                   | I   | 2.4 2.4 2.4 2.4 |
| 92      | AINL-     | A/D Converter Analog Input (Lch, -)                   | I   | 2.4 2.4 2.4 2.4 |
| 93      | AINL+     | A/D Converter Analog Input (Lch, +)                   | I   | 2.4 2.4 2.4 2.4 |
| 94      | VCOM      | Common Voltage  | O   | 2.4 2.4 2.4 2.4 |
| 95      | VRADL     | Connect to +5V (for A/D Converter)                    | I   | 0 0 0 0         |
| 96      | AVSS      | Connect to ground (Analog Ground)                     | —   | 0 0 0 0         |
| 97      | AVDD      | Connect to Ground (Analog Power)                      | —   | 5.0 5.0 5.0 5.0 |
| 98      | VRADH     | Connect to +5V (for A/D Converter)                    | I   | 5.0 5.0 5.0 5.0 |
| 99      | AVB       | Connect to +5V (for Analog)                           | —   | 5.0 5.0 5.0 5.0 |
| 100     | (NC)      | —   | —   | —               |

## TERMINALS DESCRIPTION (Display Block)

### ■ IC901 YEAMLC75884W

| Pin No. | Name        | Description                 | I/O | Vol.(V) |
|---------|-------------|-----------------------------|-----|---------|
| 1       | (NC)        | —                           | —   | —       |
| 2-51    | S4-S53      | LCD Segment 4 -53           | O   | 2.7     |
| 52      | COM1        | LCD Common 1                | O   | 2.7     |
| 53      | COM2        | LCD Common 2                | O   | 2.7     |
| 54      | COM3        | LCD Common 3                | O   | 2.7     |
| 55      | COM4        | LCD Common 4                | O   | 2.7     |
| 56      | KS1         | Key Scan Output 1           | O   | 0.9     |
| 57      | KS2         | Key Scan Output 2           | O   | 0.9     |
| 58      | KS3         | Key Scan Output 3           | O   | 0.9     |
| 59      | KS4         | Key Scan Output 4           | O   | 0.9     |
| 60      | KS5         | Key Scan Output 5           | O   | 0.9     |
| 61      | KS6         | Key Scan Output 6           | O   | 0.9     |
| 62 - 66 | KI1 - KI5   | Key Return 1 -5             | I   | 0       |
| 67      | VDD         | Connect to +5V              | —   | 5.1     |
| 68      | VLCD        | LCD Reference Voltage (VDD) | I   | 5.1     |
| 69      | VLCD1       | LCD Reference Voltage (1)   | I   | 3.3     |
| 70      | VLCD2       | LCD Reference Voltage (2)   | I   | 1.7     |
| 71      | VSS         | Connect to Ground           | —   | 0       |
| 72      | TEST        | TEST Mode                   | I   | 0       |
| 73      | OSC         | CR Oscillator               | I   | 3.9     |
| 74      | /RESET      | Reset                       | I   | 5.1     |
| 75      | DO          | LCD Data Output             | O   | 4.1     |
| 76      | CE          | LCD Chip Enable             | I   | 0       |
| 77      | CLK         | LCD Clock                   | I   | 0       |
| 78      | DI          | LCD Data Input              | I   | 0       |
| 79      | KEY LED CNT | "POWER" LED Control         | O   | 2.7     |
| 80      | P.LED CNT   | "KEY" LED Control           | O   | 2.7     |

### ■ IC902 C0HBA0000029

| Pin No. | Name        | Description             | I/O | Vol.(V) |
|---------|-------------|-------------------------|-----|---------|
| 1 - 58  | S3 - S60    | LCD Segment             | O   | 2.7     |
| 59 - 66 | COM8 - COM1 | Key Signal Input        | I   | 0       |
| 67      | VDD         | +5V Power Voltage       | —   | 5.1     |
| 68      | VLCD        | LCD Drive Voltage (VDD) | I   | 5.1     |
| 69      | VLCD1       | LCD Drive Voltage (1)   | I   | 3.8     |
| 70      | VLCD2       | LCD Drive Voltage (2)   | I   | 2.5     |
| 71      | VLCD3       | LCD Drive Voltage (3)   | I   | 1.3     |
| 72      | VSS         | Connected to Ground     | —   | 0       |
| 73      | OSCO        | CR Oscillator           | O   | 3.9     |
| 74      | OSCI        | CR Oscillator           | I   | 2.7     |
| 75      | /RESET      | Reset Input             | I   | 5.1     |
| 76      | CE          | LCD Chip Enable         | I   | 0       |
| 77      | CLK         | LCD Clock               | I   | 0       |
| 78      | DI          | LCD Data                | I   | 0       |
| 79      | S1          | LCD Segment             | O   | 2.7     |
| 80      | S2          | LCD Segment             | O   | 2.7     |

# TERMINALS DESCRIPTION (CD Servo Block)

## ■ IC201 YEAMCXD2587Q

| Pin No. | Port     | Description   | I/O | Vol. (V) |
|---------|----------|---|-----|----------|
| 1       | SQSO     | Sub-Q 80bit,PCM Peak and Level Data Output                                  | O   | 0        |
| 2       | SQCK     | Clock Input for SQSO Read Output  | I   | 5        |
| 3       | XRST     | System Reset (L:Reset)  | I   | 0        |
| 4       | SYSM     | Mute Input (H:Mute)   | I   | 3.4      |
| 5       | DATA     | Serial Data Input from CPU  | I   | 5        |
| 6       | XLAT     | Serial Latch Input from CPU   | I   | 4.1      |
| 7       | CLOCK    | Serial Clock Input from CPU   | I   | 0.5      |
| 8       | SENS     | Sens Output to CPU  | O   | 5        |
| 9       | SCLK     | Serial Clock Input for SENS Data Read                                       | I   | 0        |
| 10      | VDD      | +5V Power Supply for Digital  | —   | 5        |
| 11      | ATSK     | For Anti-Shock  | I/O | 0        |
| 12      | SPOA     | Microcomputer Extension Interface (Input A)                                 | I   | 5        |
| 13      | SPOB     | Microcomputer Extension Interface (Input B)                                 | I   | 5        |
| 14      | XLON     | Microcomputer Extension Interface (Output)                                  | O   | 4.8      |
| 15      | WFOK(NC) | —   | —   | —        |
| 16      | MNT1(NC) | —   | —   | —        |
| 17      | MNT0(NC) | —   | —   | —        |
| 18      | MNT3(NC) | —   | —   | —        |
| 19      | C2PO(NC) | —   | —   | —        |
| 20      | SCOR(NC) | —   | —   | —        |
| 21      | COUT(NC) | —   | —   | —        |
| 22      | MIRR     | Mirror Signal   | I/O | 0        |
| 23      | DFCT     | Defect Signal   | I/O | 0        |
| 24      | FOK      | Focus OK Signal   | I/O | 4.8      |
| 25      | LOCK     | GFS Signal Output Sampling by 460Hz (H:GFS to High,L:GFS to Low of 8 times) | I/O | 4.8      |
| 26      | MDP      | Servo Control Output for Spindle Motor                                      | O   | 2.5      |
| 27      | SSTP     | Disc Most Inner Track Detection Signal Input                                | —   | 0        |
| 28      | SFDR     | Sled Drive Output   | O   | 0        |
| 29      | SRDR     | Sled Drive Output   | O   | 0        |
| 30      | TFDR     | Tracking Drive Output   | O   | 0        |
| 31      | TRDR     | Tracking Drive Output   | O   | 0        |
| 32      | FFDR     | Focus Drive Output  | O   | 0        |
| 33      | FRDR     | Focus Drive Output  | O   | 0        |
| 34      | VSS      | Digital GND   | —   | 0        |
| 35      | TEST     | (Connecting to GND)   | —   | 0        |
| 36      | TES1     | (Connecting to GND)   | —   | 0        |
| 37      | XTSL     | Crystal Selector Input  | —   | 0        |
| 38      | VC       | Center Voltage Input  | I   | 2.4      |
| 39      | FE       | Focus Error Signal Input  | I   | 2.6      |
| 40      | SE       | Sled Error Signal Input   | I   | 2.1      |
| 41      | TE       | Tracking Error Input  | I   | 2.1      |
| 42      | CE       | Center Servo Analog Input   | I   | 2.4      |
| 43      | RFDC     | RF Signal Input   | I   | 3.1      |
| 44      | ADKO(NC) | —   | —   | —        |
| 45      | AVss0    | Analog GND  | —   | 0        |
| 46      | IGEN     | Constant Current Input for OP Amplifier                                     | I   | 1.4      |
| 47      | AVdd0    | +5V Power Supply for Analog   | —   | 5.0      |
| 48      | ASVO     | EFM Full-Swing Output (L:VSS,H:VDD)   | O   | 2.7      |
| 49      | ASYI     | Asymmetry Compare Voltage Input   | I   | 2.4      |
| 50      | BIAS     | Asymmetry Circuit Constant Current Input                                    | I   | 0.9      |
| 51      | RFAC     | EMF Signal Input  | I   | 0        |
| 52      | AVss3    | Analog GND  | —   | 0        |
| 53      | CLTV     | VCO Control Voltage Input for Master  | I   | 2.0      |
| 54      | FILO     | Filter Output for Master PLL (Slave:Digital PLL)                            | O   | 2.5      |
| 55      | FILI     | Filter Input for Master PLL   | I   | 2.4      |
| 56      | PCO      | Charge Pump Output for Master PLL   | O   | 2.5      |
| 57      | AVdd3    | +5V Power Supply for Analog   | —   | 5.0      |
| 58      | VSS      | Digital GND   | —   | 0        |
| 59      | VDD      | +5V Power Supply for Digital  | —   | 5.0      |
| 60      | DOUT(NC) | —   | —   | —        |
| 61      | LRCK(NC) | —   | —   | —        |
| 62      | PCMD(NC) | —   | —   | —        |
| 63      | BCK(NC)  | —   | —   | —        |
| 64      | EMPH(NC) | —   | —   | —        |
| 65      | XVDD     | +5V Power Supply for Master Clock   | —   | 5.0      |
| 66      | XTAI     | Crystal Oscillator Input of Master Clock                                    | I   | 2.3      |
| 67      | XTAO     | Crystal Oscillator Output   | O   | 2.6      |
| 68      | XVSS     | Analog GND for Master Clock   | —   | 0        |
| 69      | AVdd1    | +5V Power Supply for Analog   | —   | 5.0      |
| 70      | AOUT1    | Lch, Analog Output  | O   | 2.0      |
| 71      | AIN1     | Lch, Analog Input   | I   | 2.0      |
| 72      | LOUT1    | Lch, LINE Output  | O   | 2.0      |
| 73      | AVSS1    | Analog GND  | —   | 0        |
| 74      | AVSS2    | Analog GND  | —   | 0        |
| 75      | LOUT2    | Rch, LINE Output  | O   | 2.0      |
| 76      | AIN2     | Rch, OP Amplifier Input   | I   | 2.0      |
| 77      | AOUT2    | Rch, Analog Output  | O   | 2.0      |
| 78      | AVdd2    | +5V Power Supply for Analog   | —   | 5.0      |
| 79      | RMUT(NC) | —   | —   | —        |
| 80      | LMUT(NC) | —   | —   | —        |

## ■ IC451 YEAMM471377M

| Pin No. | Port         | Description  | I/O | Vol. (V) |
|---------|--------------|--|-----|----------|
| 1       | NC           | —  | —   | —        |
| 2       | SQSO         | Q Code Serial Data Read  | I   | 0.3      |
| 3       | SYSM         | LSI Mute ON Signal (H:Mute ON,L:Mute OFF)                                  | O   | 0        |
| 4       | CLOCK        | Serial Clock Output to Servo Signal Process LSI                            | O   | 4.3      |
| 5       | XLAT         | Serial Latch Pulse Output to Servo Signal Process LSI                      | O   | 5.0      |
| 6       | DATA         | Serial Data Output to Servo Signal Process LSI                             | O   | 3.5      |
| 7       | PCO          | Spindle Motor ON/OFF (H:OFF,L:ON)<br>Photo Sensor ON/OFF (H:OFF,L:ON)      | I/O | 5.0      |
| 8       | R            | Right Insert Detection (L:Detect)  | I   | 0        |
| 9       | L            | Left Insert Detection (L:Detect)   | I   | 0        |
| 10      | OUT R        | Disc OUT Detection (H:Detect)  | I   | 0        |
| 11      | INNER SW     | Inner Track Detection (L:Detect)   | I   | 4.8      |
| 12      | OUT L        | Disc OUT Detection (H:Detect)  | I   | 0        |
| 13      | IN           | Disc IN Detection (H:Detect)   | I   | 0        |
| 14      | CLUMP        | Disc Clump Detection (H:Detect)  | I   | 0        |
| 15      | Vref         | Reference Voltage  | —   | 2.4      |
| 16      | NC           | —  | —   | —        |
| 17      | NC           | —  | —   | —        |
| 18      | XIN          | Crystal Oscillator Input   | I   | 2.4      |
| 19      | XOUT         | Crystal Oscillator Output  | O   | 2.5      |
| 20      | NC           | —  | —   | —        |
| 21      | Avss         | Analog GND   | —   | 0        |
| 22      | Vss          | GND  | —   | 0        |
| 23      | Vcc          | +5V Power Supply   | —   | 5.0      |
| 24      | NC           | —  | —   | —        |
| 25      | P50/XCIN(NC) | —  | —   | —        |
| 26      | DFCT         | Defect Detection Signal (H:Detect)   | I   | 0        |
| 27      | NC           | —  | —   | —        |
| 28      | /RST         | CPU Reset  | I   | 5.0      |
| 29      | NC           | —  | —   | —        |
| 30      | CDON         | Control Signal for Deck Control Micro Computer (H:ON,L:Sleep)              | I   | 5.0      |
| 31      | ATSK         | Anti-Shock Detection Signal (H:Detect)                                     | I   | 0        |
| 32      | FOK          | RF Level Detection Signal (H:Focus ON,L:Focus OUT)                         | I   | 4.8      |
| 33      | SENS         | Internal Status Input from Servo Signal Process LSI                        | I   | 5.0      |
| 34      | NC           | —  | —   | —        |
| 35      | PC2          | Loading Motor Driver ON/OFF (L:ON)   | I/O | 5.0      |
| 36      | LOCK         | GFS Signal Input Sampling by 460Hz (H:GFS to High,L:GFS to Low of 8 times) | I   | 4.8      |
| 37      | MODE         | Mode Selector Signal at Accessing (H:Selector ON,L:selector OFF)           | O   | 0        |
| 38      | LOD          | Loding Motor Control (H:Eject,L:Load)                                      | I/O | 2.4      |
| 39      | PC1          | Actuator Motor Driver ON/OFF (H:Motor ON,L:Motor OFF)                      | I/O | 0        |
| 40      | CLKOFF       | LSI Clock Oscillation Stop Signal (H:OSC, L:Stop)                          | O   | 5.0      |
| 41      | PLLOFF       | VCO Oscillation 5 stop Signal (H:Stop, L:OSC)                              | O   | 0        |
| 42      | SCLK         | Cock Output for SENS Serial Data Read                                      | O   | 5.0      |
| 43      | SIM          | Serial Data Input from Micro Computer                                      | I   | 0        |
| 44      | NC           | —  | —   | —        |
| 45      | NC           | —  | —   | —        |
| 46      | SOM          | Serial Data Output to Micro Computer                                       | O   | 0        |
| 47      | SCKM         | Serial Clock Output to Micro Computer                                      | O   | 5.0      |
| 48      | MUTE         | Analog Mute ON Signal (H:Mute ON,L:Mute OFF)                               | O   | 0        |
| 49      | MIRR         | Mirror Detection Signal (H:MIRR Det,L:ON MIRR)                             | I   | 0        |
| 50      | NC           | —  | —   | —        |
| 51      | Vss          | GND  | —   | 0        |
| 52      | SE           | SE Signal Input  | I   | 2.1      |
| 53      | XRST         | Reset Output to Servo Signal Process LSI                                   | O   | 5.0      |
| 54      | SQCK         | Clock Output to Servo Signal Process LSI                                   | O   | 5.0      |
| 55      | P15/TXD(NC)  | —  | —   | —        |
| 56      | NC           | —  | —   | —        |

# TERMINALS DESCRIPTION (MD Servo Block -1)

## IC401 MN66614R4C1

| Pin No. | Port        | Description  | I/O | Vol. (V) |
|---------|-------------|--|-----|----------|
| 1       | PEFMS       | FEM Data Slice Input                                   | I   | 1.8      |
| 2       | AVSS2       | Analog GND   | I   | 0        |
| 3       | AVDD2       | +3.3V Power Supply for Analog                          | I   | 3.4      |
| 4       | FE          | Focus Error Signal                                     | I   | 1.8      |
| 5       | TE          | Tracking Error Signal                                  | I   | 1.8      |
| 6       | GFC         | Focus Acceleration Sensor Input                        | I   | 1.8      |
| 7       | GTK         | Tracking Acceleration Sensor Input                     | I   | 1.8      |
| 8       | VRT         | Positive Reference Voltage for A/D Converter           | I   | 2.8      |
| 9       | VRB         | Negative Reference Voltage for A/D Converter           | I   | 0.7      |
| 10      | 3TMON       | FEM 3T Signal Envelope Input                           | I   | 1.7      |
| 11      | AS          | Beam Sum Signal  | I   | 2.4      |
| 12      | TVD         | Traverse Drive/Stepping Motor Drive Signal             | O   | 1.8      |
| 13      | SPD         | Spindle Drive Signal                                   | O   | 1.9      |
| 14      | STP (NC)    | —  | —   | —        |
| 15      | TRD         | Tracking Drive Signal                                  | O   | 1.8      |
| 16      | AVSS1       | Analog GND   | I   | 0        |
| 17      | AVDD1       | +3.3V Power Supply for Analog                          | I   | 3.4      |
| 18      | VREF1       | Reference Voltage Input                                | I   | 1.8      |
| 19      | TOFS        | TE Offset Adjust Output                                | O   | 1.8      |
| 20      | ASOFS       | AS Offset Adjust Output                                | O   | 1.8      |
| 21      | FOFS        | FE Offset Adjust Output                                | O   | 1.8      |
| 22      | FBAL        | FE Balance Adjust Output                               | O   | 1.8      |
| 23      | TGAIN       | TE Gain Adjust Output                                  | O   | 1.7      |
| 24      | TBAL        | TE Balance Adjust Output                               | O   | 1.8      |
| 25      | ASGAIN      | AS Gain Adjust Output                                  | O   | 1.8      |
| 26      | FOD         | Focus Drive Signal                                     | O   | 1.8      |
| 27      | AVSS0       | Analog GND   | I   | 0        |
| 28      | FEMPLLF     | Filter Input for EFM PLL                               | I   | 1.8      |
| 29      | EFMIREF     | Current Control Input for EFM PLL                      | I   | 1.3      |
| 30      | AVDD0       | +3.3V Power Supply for System Clock PLL                | I   | 3.4      |
| 31      | SISPLLF     | Filter Input for                                       | I   | 1.8      |
| 32      | TS0         | (Connecting to GND)                                    | I   | 0        |
| 33      | MDAIREF     | Current Control Input for System Clock PLL             | I   | 1.3      |
| 34      | TS1         | (Connecting to GND)                                    | I   | 0        |
| 35      | TRNPLLF     | Filter Input for Internal Clock PLL                    | I   | 3.4      |
| 36      | TS2         | (Connecting to GND)                                    | I   | 0        |
| 37      | DIPCO       | PLL PD Output to Digital Audio Interface               | O   | 3.4      |
| 38      | DIBUFI      | Integrate Amplifier Input from Digital Audio Interface | I   | 2.5      |
| 39      | DIBUFO      | Integrate Amplifier Output to Digital Audio Interface  | O   | 0        |
| 40      | DIVCOI      | VCO Control Voltage Input from Digital Audio Interface | I   | 0        |
| 41      | TS3         | (Connecting to GND)                                    | I   | 0        |
| 42      | TS4         | (Connecting to GND)                                    | I   | 0        |
| 43      | NRFDET      | EMF Detection Signal (L:Detect)                        | I   | 0.2      |
| 44      | BDO         | AS Drop Out Signal (H:Drop Out)                        | I   | 0.2      |
| 45      | DVDD0       | +3.3V Power Supply for Digital                         | I   | 3.4      |
| 46      | DVSS0       | Digital GND  | I   | 0        |
| 47      | FOTRON (NC) | —  | —   | —        |
| 48      | TVON (NC)   | —  | —   | —        |
| 49      | SPON        | Spindle Drive ON Signal                                | O   | 3.4      |
| 50      | DR (NC)     | —  | —   | —        |
| 51      | FG          | FG Input   | I   | 1.5      |
| 52      | REFM (NC)   | —  | —   | —        |
| 53      | NREFM (NC)  | —  | —   | —        |
| 54      | HFRP (NC)   | —  | —   | —        |
| 55      | APCD        | Laser Power Setting PWM Output                         | O   | 1.9      |
| 56      | NREC (NC)   | —  | —   | —        |
| 57      | NRST        | Hardware Reset (L:Reset)                               | I   | 3.3      |
| 58      | SELAD       | Command Address Select Signal                          | I   | 0.6      |
| 59      | SSCK        | Command Serial Clock Signal                            | I   | 3.3      |
| 60      | SSDW        | Command Serial Write Data                              | I   | 0.6      |
| 61      | SSDR        | Command Serial Read Data                               | O   | 2.2      |
| 62      | MDISY       | CD ROM Sector sync Signal                              | O   | 0.2      |
| 63      | SCTCY       | SUBQ/ADIP Sync Signal                                  | O   | 0.2      |
| 64      | CFSYNC      | ATRAC Frame Sync Signal                                | O   | 0.2      |

| Pin No. | Port       | Description  | I/O | Vol. (V) |
|---------|------------|--|-----|----------|
| 65      | VREF5      | Reference Voltage for Signal Level                             | I   | 3.4      |
| 66      | DVDD1      | +3.3V Power Supply for Digital                                 | I   | 3.4      |
| 67      | DVSS1      | Digital GND  | I   | 0        |
| 68      | RAD10      | DRAM Address 10 (MSB)  | O   | 1.6      |
| 69      | RAD9       | DRAM Address 9   | O   | 1.6      |
| 70      | RAD8       | DRAM Address 8   | O   | 1.6      |
| 71      | RAD7       | DRAM Address 7   | O   | 1.6      |
| 72      | RAD6       | DRAM Address 6   | O   | 1.6      |
| 73      | RAD5       | DRAM Address 5   | O   | 1.8      |
| 74      | RAD4       | DRAM Address 4   | O   | 1.6      |
| 75      | DVDD2      | +3.3V Power Supply   | I   | 3.4      |
| 76      | DVSS2      | Digital GND  | I   | 0        |
| 77      | RAD3       | DRAM Address 3   | O   | 1.5      |
| 78      | RAD2       | DRAM Address 2   | O   | 1.8      |
| 79      | RAD1       | DRAM Address 1   | O   | 1.8      |
| 80      | RAD0       | DRAM Address 0 (LSB)   | O   | 2.7      |
| 81      | RDT3       | DRAM Data 3 (MSB)  | I/O | 1.6      |
| 82      | RDT2       | DRAM Data 2  | I/O | 1.6      |
| 83      | RDT1       | DRAM Data 1  | I/O | 1.8      |
| 84      | RDT0       | DRAM Data 0 (LSB)  | I/O | 2.5      |
| 85      | NRAS       | DRAM Lower Address Strobe                                      | O   | 2.5      |
| 86      | NCAS       | DRAM Column Address Strobe                                     | O   | 2.3      |
| 87      | NWE        | DRAM Write Enable  | O   | 1.8      |
| 88      | FS384      | 384Fs Output   | O   | 1.7      |
| 89      | SCL        | Bit Clock Output (64Fs)  | O   | 1.8      |
| 90      | SW6        | Pear Compression Word Clock Output (Fs)                        | O   | 1.2      |
| 91      | SDAP       | Audio Data Output to D/A Converter                             | O   | 1.8      |
| 92      | SWSA (NC)  | —  | —   | —        |
| 93      | SDAR       | Audio Data Input from A/D Converter                            | I   | 0        |
| 94      | TX (NC)    | —  | —   | —        |
| 95      | DVDD3      | +3.3V Power Supply for Digital                                 | I   | 3.4      |
| 96      | RX1        | Digital Audio Interface Signal Output 1 (C-MOS)                | I   | 0        |
| 97      | RX2        | Digital Audio Interface Signal Output 2 (C-MOS)                | I   | 0        |
| 98      | DVSS3      | Digital GND  | I   | 0        |
| 99      | DIULK (NC) | —  | —   | —        |
| 100     | RCL (NC)   | —  | —   | —        |
| 101     | RSWSA (NC) | —  | —   | —        |
| 102     | RXDA (NC)  | —  | —   | —        |
| 103     | R384 (NC)  | —  | —   | —        |
| 104     | CVDA       | Clock Input for CD-TEXT Data Communication                     | I   | 0        |
| 105     | CV384      | (Connecting to GND)  | I   | 0        |
| 106     | DADD4 (NC) | +3.3V Power Supply for Digital                                 | I   | 3.4      |
| 107     | XI         | Crystal Oscillator Input (16.934MHz)                           | I   | 1.6      |
| 108     | XO         | Crystal Oscillator Output (16.934MHz)                          | O   | 1.8      |
| 109     | DVSS4      | Digital GND  | I   | 0        |
| 110     | MONI0      | Monitor Output 0/CD-TEX Communication Data Output              | O   | 1.8      |
| 111     | MONI1      | Monitor Output 1   | O   | 0        |
| 112     | MONI2      | Sub-Code Frame Sync Signal Output for CD-TEXT                  | O   | 3.4      |
| 113     | MONI3      | Monitor Output 3/Sub-Code Block Sync Signal Output for CD-TEXT | O   | 3.4      |
| 114     | MONI4      | (Open)   | O   | 0        |
| 115     | MONI5      | (Open)   | O   | 0        |
| 116     | TRNFI      | Filter Input for Internal Clock PLL                            | I   | 0        |
| 117     | SYSFI      | Filter Input for System Clock PLL                              | I   | 0        |
| 118     | TCSEL      | (Connecting to GND)  | I   | 0        |
| 119     | RFSPWPG    | RFIC Bit/Group Setting (H:Bit)                                 | O   | 0        |
| 120     | TRCRS      | Track Close Signal   | I   | 3.3      |
| 121     | OFTR       | Off Track Signal (H:Off Track)                                 | I   | 2.5      |
| 122     | DVDD5      | +3.3V Power Supply for Digital                                 | I   | 3.4      |
| 123     | ADIP       | ADIP FM Signal Input (21.6±0.98kHz, 100mVp-p or more)          | I   | 1.5      |
| 124     | DVSS5      | Digital GND  | I   | 0        |
| 125     | VREFD      | Reference Voltage PWM Output/Drive IC Track                    | O   | —        |
| 126     | EFMSEL     | (Connecting to GND)  | I   | 0        |
| 127     | PEFM1      | Loop Filter Output 1 for Data Slice                            | O   | 1.8      |
| 128     | PEFM2      | Loop Filter Output 2 for Data Slice                            | O   | 1.8      |

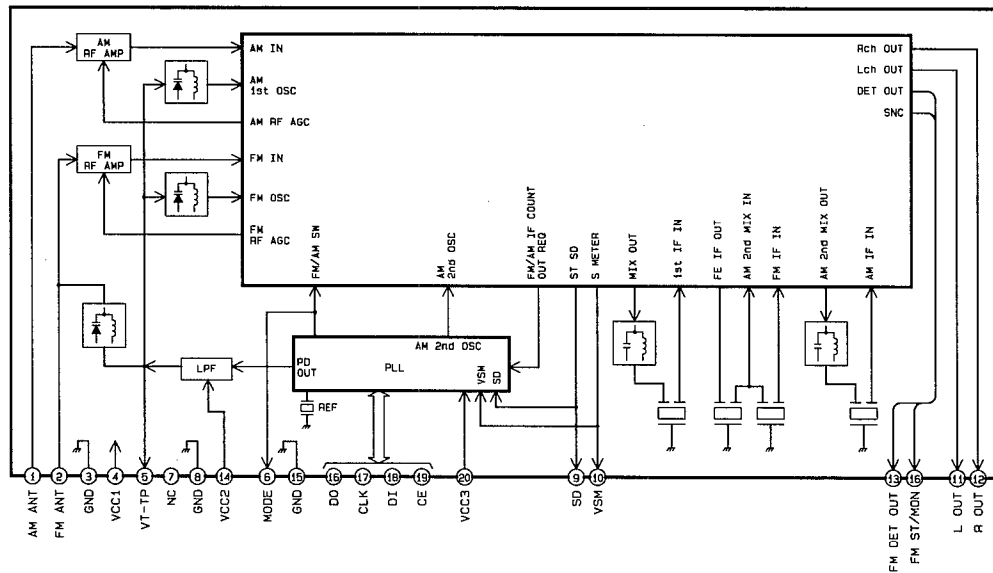
## TERMINALS DESCRIPTION (MD Servo Block -2)

## ■ IC501 MN101C01DAF

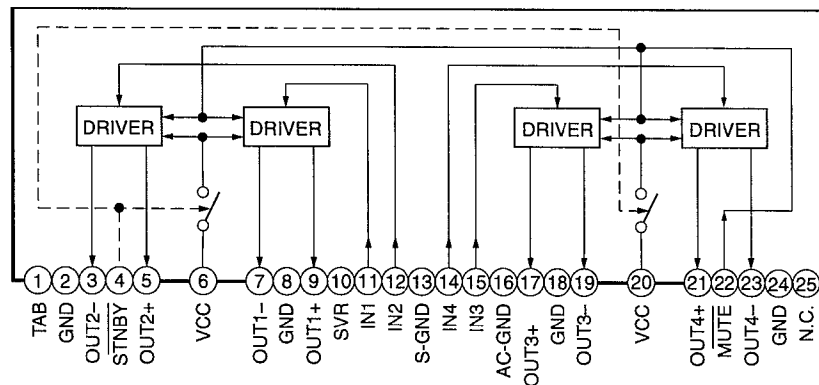
| Pin No. | Port  | Name     | Description                              | I/O | Vol. (V) |
|---------|-------|----------|--|-----|----------|
| 1       | VREF  | (NC)     | —  | —   | —        |
| 2       | AN0   | (NC)     | —  | —   | —        |
| 3       | AN1   | (NC)     | —  | —   | —        |
| 4       | AN2   | (NC)     | —  | —   | —        |
| 5       | AN3   | (NC)     | —  | —   | —        |
| 6       | AN4   | (NC)     | —  | —   | —        |
| 7       | AN5   | (NC)     | —  | —   | —        |
| 8       | AN6   | (NC)     | —  | —   | —        |
| 9       | AN7   | (NC)     | —  | —   | —        |
| 10      | VREF+ | VREF+    | Reference Voltage for A/D Converter      | —   | 3.4      |
| 11      | VDD   | VDD      | +3.3V Power Supply                       | —   | 3.4      |
| 12      | OSC2  | OSC2     | Crystal Oscillator Output (7.37MHz)      | O   | 1.7      |
| 13      | OSC1  | OSC1     | Crystal Oscillator Input (7.37MHz)       | I   | 1.7      |
| 14      | VSS   | VSS      | GND                                      | —   | 0        |
| 15      | XI    | (NC)     | —  | —   | —        |
| 16      | XO    | (NC)     | —  | —   | —        |
| 17      | MMQD0 | (NC)     | —  | —   | —        |
| 18      | P00   | (NC)     | —  | —   | —        |
| 19      | P01   | (NC)     | —  | —   | —        |
| 20      | P02   | (NC)     | —  | —   | —        |
| 21      | P03   | SSDW     | Serial Write Data to IC401               | O   | 0.6      |
| 22      | SBI1  | SSDR     | Serial Read Data from IC402              | I   | 2.0      |
| 23      | SBT1  | SCLK     | Serial Clock to IC401                    | O   | 3.3      |
| 24      | P06   | (NC)     | —  | —   | —        |
| 25      | NRST  | RESET    | CPU Reset                                | I   | 3.0      |
| 26      | P10   | SELAD    | Serial Address Select from IC401         | I   | 0.7      |
| 27      | P11   | (NC)     | —  | —   | —        |
| 28      | P12   | (NC)     | —  | —   | —        |
| 29      | P13   | CAS      | DRAM CAS Signal                          | I   | 3.0      |
| 30      | P14   | (NC)     | —  | —   | —        |
| 31      | IRQ0  | MDON     | System Start/Stop Control (H:Start)      | I   | 2.6      |
| 32      | IRQ1  | MDISY    | Sector Sync from IC401                   | I   | 0.7      |
| 33      | IRQ2  | SCTCY    | SUBQ/ADIP Sync                           | I   | 0.2      |
| 34      | IRQ3  | CFCSNC   | ATRAC Frame Sync                         | I   | 0.2      |
| 35      | IRQ4  | (NC)     | —  | —   | —        |
| 36      | P30   | SOM      | Serial Data Output for Bus Communication | O   | 1.3      |
| 37      | SBI2  | SIM      | Serial Data Input for Bus Communication  | I   | 1.0      |
| 38      | SBT2  | SCKM     | Serial Clock Input for Bus Communication | I   | 3.3      |
| 39      | P33   | (NC)     | —  | —   | —        |
| 40      | P34   | (NC)     | —  | —   | —        |
| 41      | P35   | (NC)     | —  | —   | —        |
| 42      | P36   | (NC)     | —  | —   | —        |
| 43      | P37   | (NC)     | —  | —   | —        |
| 44      | P40   | IN SW    | Disc IN SW Input                         | I   | 0        |
| 45      | P41   | INNER SW | Inner SW Input                           | I   | 3.2      |
| 46      | P42   | MEDIA SW | Media SW Input                           | I   | 3.2      |
| 47      | P43   | CLUMP SW | Clump Completion SW Input                | I   | 0        |
| 48      | P44   | (NC)     | —  | —   | —        |
| 49      | P45   | (NC)     | —  | —   | —        |
| 50      | P46   | (NC)     | —  | —   | —        |
| 51      | P47   | (NC)     | —  | —   | —        |
| 52      | NWE   | (NC)     | —  | —   | —        |
| 53      | NRE   | (NC)     | —  | —   | —        |
| 54      | NCS   | (NC)     | —  | —   | —        |
| 55      | A16   | (NC)     | —  | —   | —        |
| 56      | A17   | (NC)     | —  | —   | —        |
| 57      | A0    | (NC)     | —  | —   | —        |
| 58      | A1    | (NC)     | —  | —   | —        |
| 59      | A2    | (NC)     | —  | —   | —        |
| 60      | A3    | (NC)     | —  | —   | —        |
| 61      | A4    | (NC)     | —  | —   | —        |
| 62      | A5    | (NC)     | —  | —   | —        |
| 63      | A6    | (NC)     | —  | —   | —        |
| 64      | A7    | (NC)     | —  | —   | —        |
| 65      | A8    | TVD      | Traverse Motor Control                   | I/O | 0.5      |
| 66      | A9    | RFSWHL   | Reflection Rate Selector for TC101       | I/O | 0        |
| 67      | A10   | RFSTBY   | Standby for IC101                        | I/O | 3.3      |
| 68      | A11   | LDON     | Laser ON Signal                          | I/O | 3.4      |
| 69      | A12   | DEMPH    | MASH Emphasis                            | I/O | 0        |
| 70      | A13   | RASON    | DRAM RAS Control (H:ON)                  | I/O | 3.4      |
| 71      | A14   | CASON    | DRAM CAS Control (H:ON)                  | I/O | 3.3      |
| 72      | A15   | CLKON    | Clock Control for IC401 (L:Stop)         | I/O | 2.9      |
| 73      | D7    | LODBAK   | Loading Motor Brake (H:Brake)            | I/O | 0        |
| 74      | D6    | LODMUTE  | Loading Motor Driver Mute (H:Mute)       | I/O | 2.6      |
| 75      | D5    | TRVMUTE  | Traverse Motor Mute (H:Mute)             | I/O | 0        |
| 76      | D4    | LOD+     | Loading Motor Control + (H:Lode,L:Eject) | I/O | 1.6      |
| 77      | D3    | LOD-     | Loading Motor Control - (H:Lode,L:Eject) | I/O | 1.6      |
| 78      | D2    | BCNT     | Reference Voltage Control (H:PSV ON)     | I/O | 3.3      |
| 79      | D1    | ACTMUTE  | Actuate Mute (H:Mute)                    | I/O | 0        |
| 80      | D0    | PRST     | Reset Input from IC401                   | I/O | 3.3      |

## PACKAGE AND IC BLOCK DIAGRAM (1)

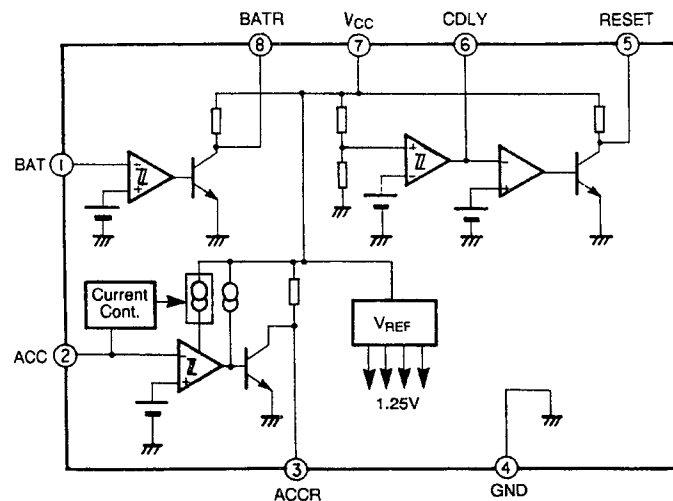
■ PA51 C5EA0000069 [E-6726A]



■ IC306 YEAMTDA7384 [E-6726A]

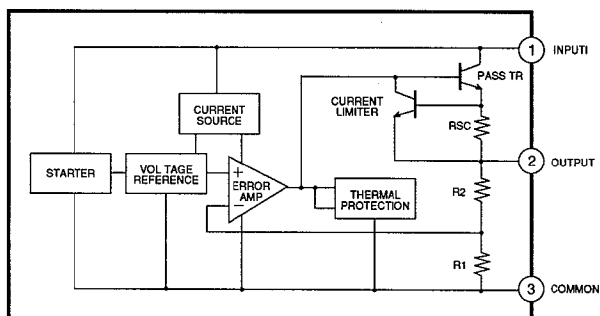


■ IC602 AN8065SE1 [E-6726A]

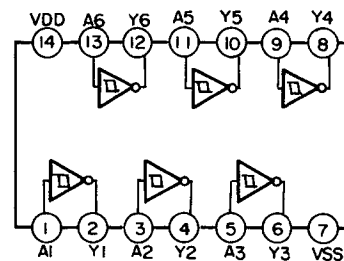


## PACKAGE AND IC BLOCK DIAGRAM (2)

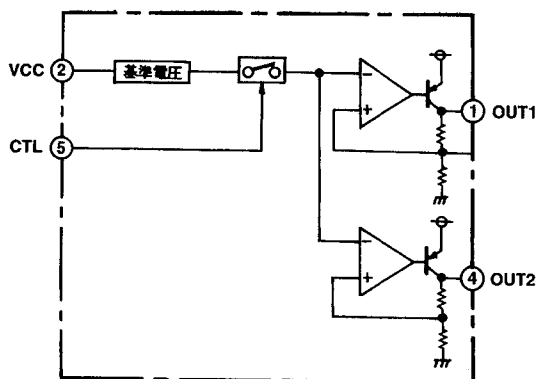
■ IC704 AN7805F [E-6726A]



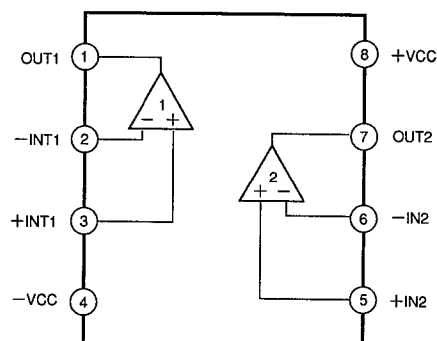
■ IC705 MN4584CST1 [E-6726A]



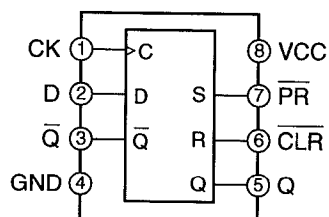
■ IC706,707 YEAMA61W12ST [E-6726A]



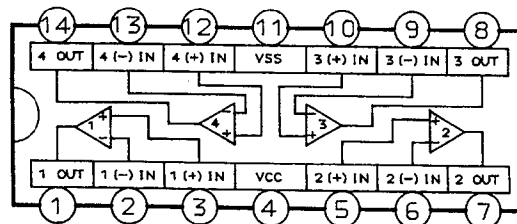
■ IC203,308 YEAMPC4570T1 [E-8587B]



■ IC204 YEAMTC7W74UL [E-8587B]



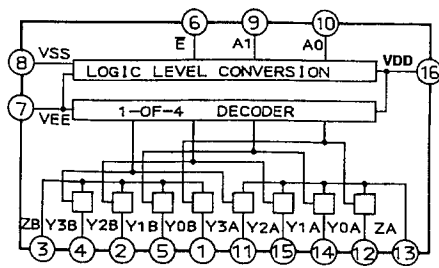
■ IC205,302 YEAMPC4574T2 [E-8587B]



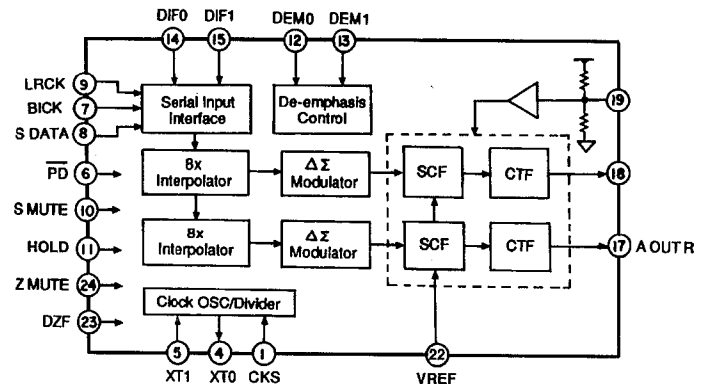


# PACKAGE AND IC BLOCK DIAGRAM (3)

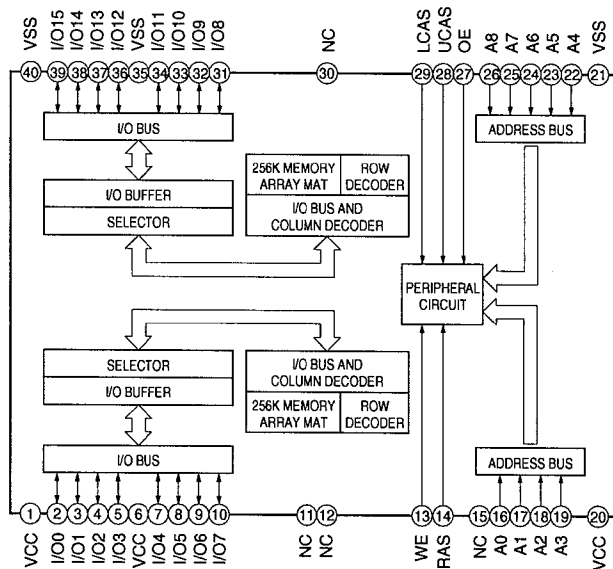
■ IC301, 303 YEAMBU4052VT [E-8587B]



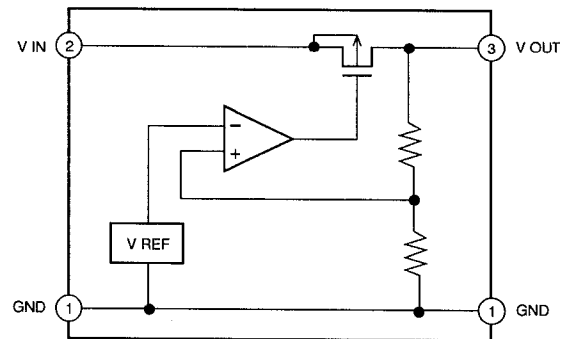
■ IC307 YEAMAK4320 [E-8587B]



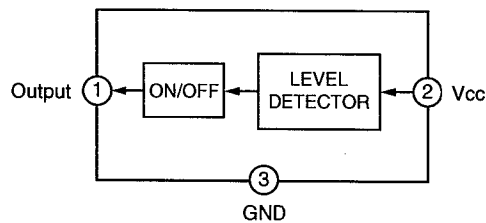
■ IC802 YEAMN4260J60 [E-8587B]



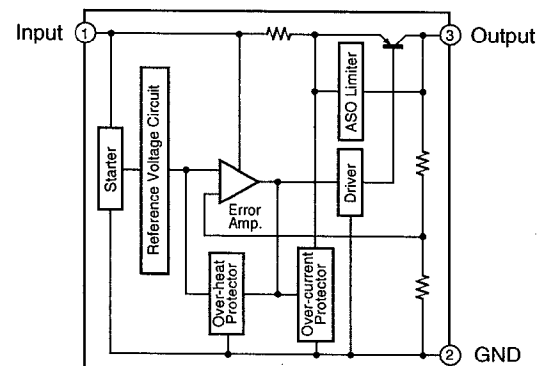
■ IC702 YEAM7200U33T [E-8587B]



■ IC903 MN1382QTX [E-8589A]

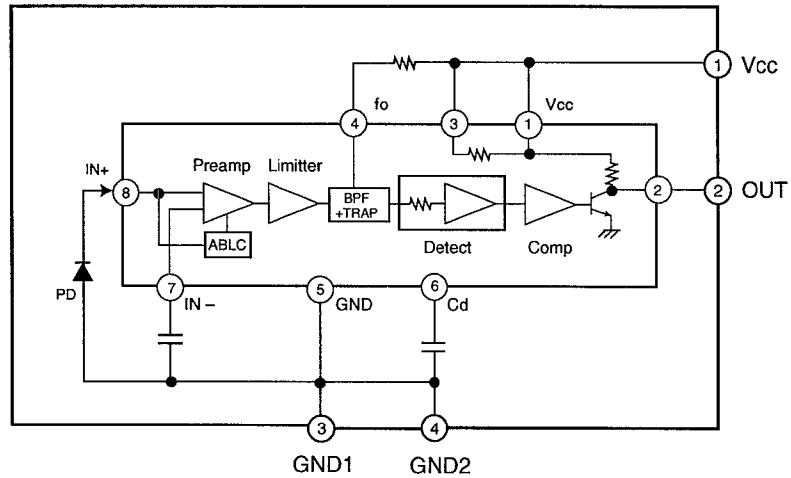


■ IC807, 808 YEAM178M05FP [E-8587B]

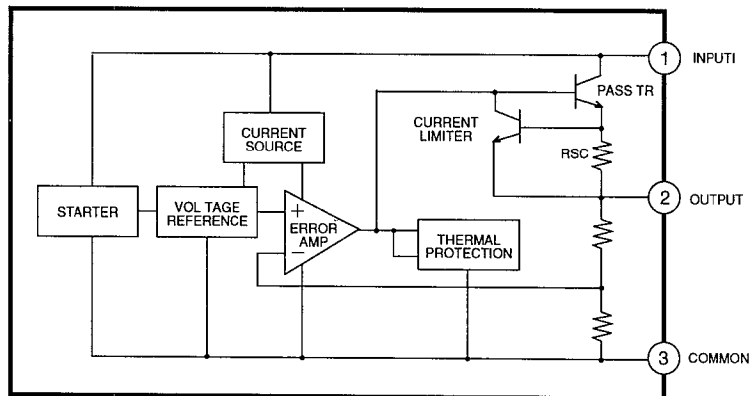


## PACKAGE AND IC BLOCK DIAGRAM (4)

## ■ IC905 YEAMPASB06B2 [E-8589A]

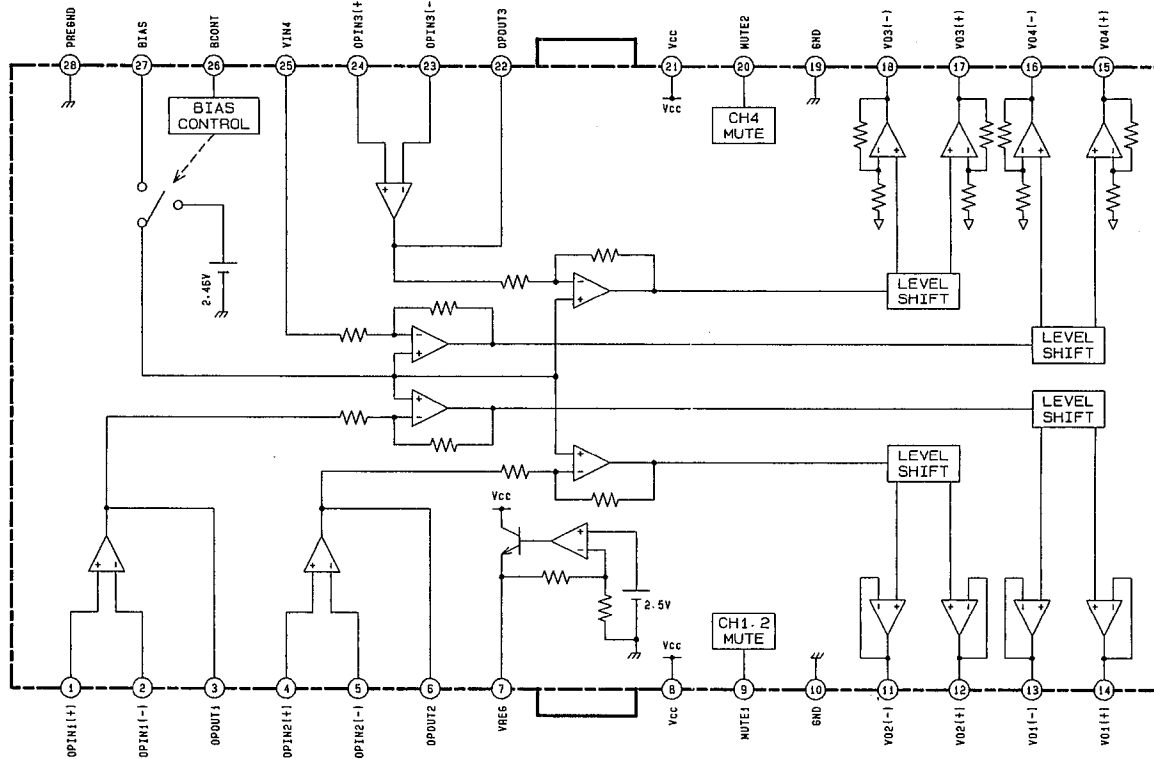


## ■ IC401 AN78N09 [E-8588B]

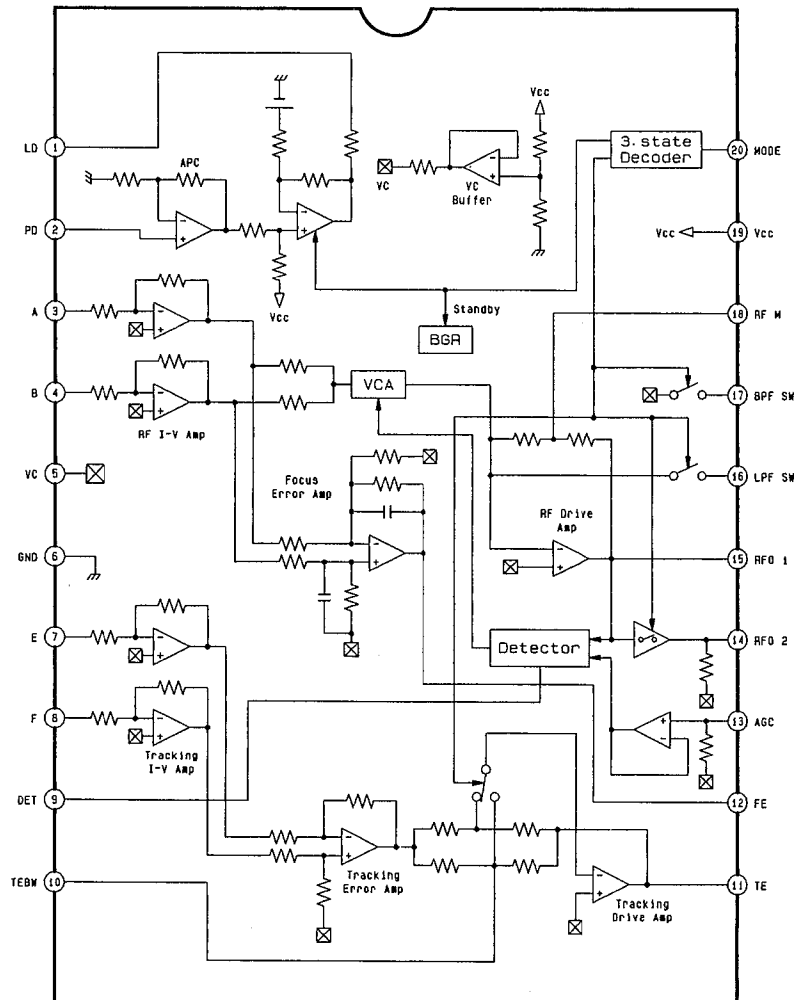


# PACKAGE AND IC BLOCK DIAGRAM (CD Servo Block)

## ■ IC951 YEAMBA5971FP [E-8400]

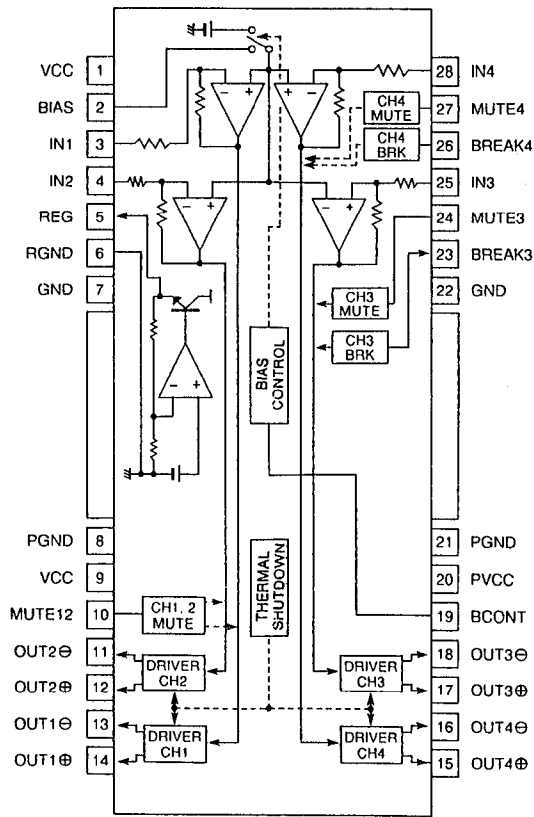


## ■ IC101 YEAMCXA2535N [E-8400]

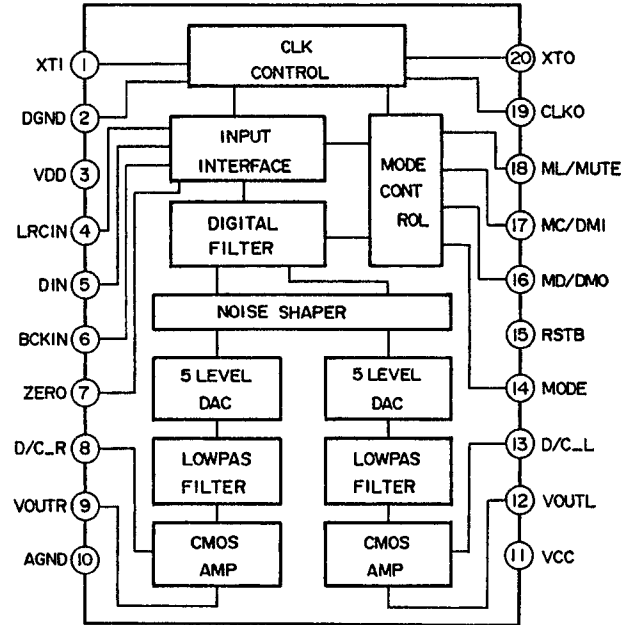


## PACKAGE AND IC BLOCK DIAGRAM (MD Servo Block)

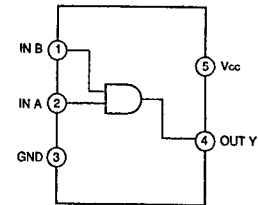
■ IC701 YEAMBA6891FP [D96222A/3]



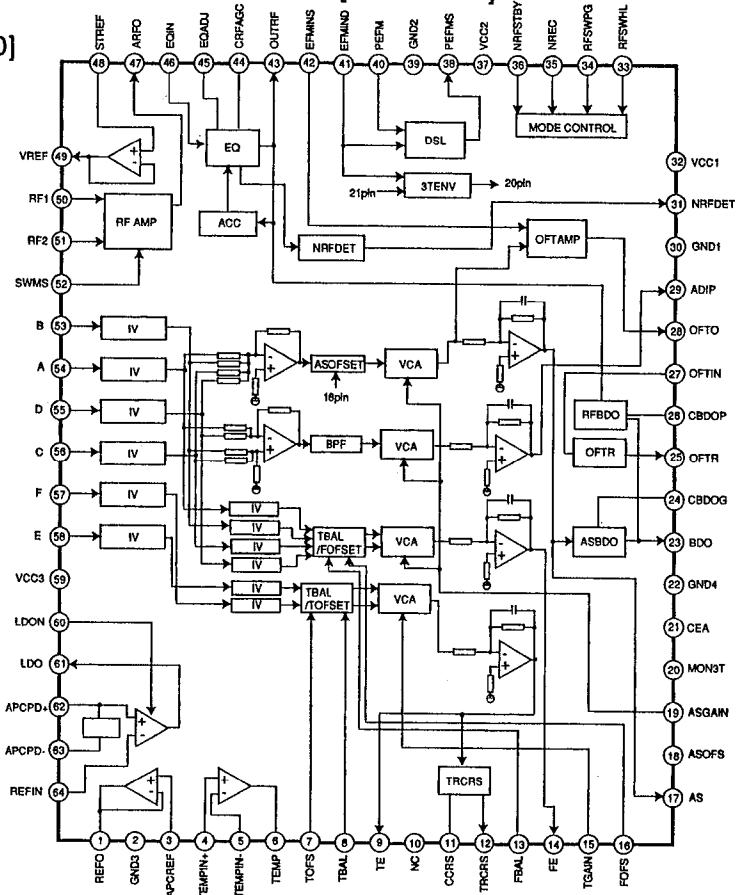
■ IC201 YEAMBBDA1717 [D96222A/3]



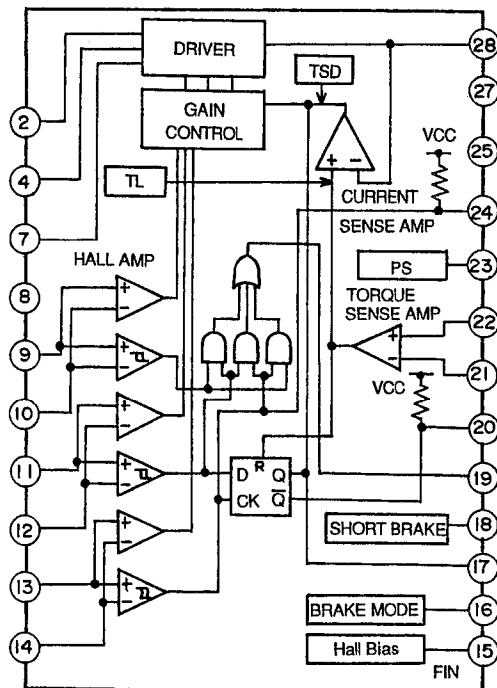
■ IC461,462 YEAMTC7SL08F [D96222A/3]



■ IC101 AN8771NFH [D96222A/3]



■ IC801 YEAMBA6858FP [M1-001-1-00]



# 1 Replacement Parts List

## Note:

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a load map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

## 1.1. IC's and Transistors

### MAIN/AMP BLOCK [E-6726A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC306    | YEAMTDA7384  | IC                      |         |
| IC501    | C2BBGE000182 | IC                      |         |
| IC602    | AN8065SE1    | IC                      |         |
| IC604    | C2BBGF000064 | IC                      |         |
| IC704    | AN7805F      | IC                      |         |
| IC705    | MN4584CST1   | IC                      |         |
| IC706    | YEAMA61W12ST | IC                      |         |
| IC707    | YEAMA61W12ST | IC                      |         |
| PA51     | C5EA00000069 | IC                      |         |
| Q501     | YEANFP1F3PT1 | Transistor              |         |
| Q502     | YEANCI144WKT | Transistor              |         |
| Q503     | YEANCI144WKT | Transistor              |         |
| Q601     | YEANCI4480AN | Transistor              |         |
| Q603     | YEANCI144EKT | Transistor              |         |
| Q604     | YEANA124EKT  | Transistor              |         |
| Q605     | YEANCI144EKT | Transistor              |         |
| Q621     | YEANCI144WKT | Transistor              |         |
| Q651     | YEANCI144EKT | Transistor              |         |
| Q652     | YEANCI144EKT | Transistor              |         |
| Q661     | YEANFA1A4PT2 | Transistor              |         |
| Q702     | YEANA1647ZKT | Transistor              |         |
| Q703     | YEANFB1F3PT1 | Transistor              |         |
| Q704     | YEANHQ1F3PT1 | Transistor              |         |
| Q705     | YEANCI144WKT | Transistor              |         |
| Q706     | YEANHQ1F3PT1 | Transistor              |         |
| Q707     | YEANCI144WKT | Transistor              |         |
| Q711     | YEANB1261ZT  | Transistor              |         |
| Q712     | YEANCI144EKT | Transistor              |         |
| Q713     | YEANCI144EKT | Transistor              |         |
| Q714     | YEANCI144EKT | Transistor              |         |
| Q718     | 2SD1273      | Transistor              |         |
| Q719     | 2SD1273      | Transistor              |         |
| Q720     | YEANCI4480AN | Transistor              |         |
| Q721     | YEANHQ1F3PT1 | Transistor              |         |

### DSP BLOCK [E-8587B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC203    | YEAMPC4570T1 | IC                      |         |
| IC204    | YEAMTC7W74UL | IC                      |         |
| IC205    | YEAMPC4574T2 | IC                      |         |
| IC301    | YEAMBU4052VT | IC                      |         |
| IC302    | YEAMPC4574T2 | IC                      |         |
| IC303    | YEAMBU4052VT | IC                      |         |
| IC307    | YEAMAK4320   | IC                      |         |
| IC308    | YEAMPC4570T1 | IC                      |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC702    | YEAM7200U33T | IC                      |         |
| IC801    | YEAMAK7712BF | IC                      |         |
| IC802    | YEAMN4260J60 | IC                      |         |
| IC807    | YEAM178M05FP | IC                      |         |
| IC808    | YEAM178M05FP | IC                      |         |
| Q201     | YEANFMG12T   | Transistor              |         |
| Q203     | YEANFMG12T   | Transistor              |         |
| Q303     | YEANFMG12T   | Transistor              |         |
| Q602     | YEANA114TUTX | Transistor              |         |
| Q750     | YEANFP1F3PT1 | Transistor              |         |
| Q751     | YEANCI144EKT | Transistor              |         |

### DISPLAY BLOCK [E-8589A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC901    | YEAMLC75884W | IC                      |         |
| IC902    | COHBA0000029 | IC                      |         |
| IC903    | MN1382QTX    | IC                      |         |
| IC905    | YEAMPASB06B2 | IC                      |         |
| Q901     | YEANFB1L3NT2 | Transistor              |         |
| Q902     | YEANCI144WKT | Transistor              |         |
| Q931     | YEANSSTA06T  | Transistor              |         |
| Q932     | YEANSSTA06T  | Transistor              |         |

### INTERFACE BLOCK [E-8588B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC401    | AN78N09      | IC                      |         |
| Q401     | YEANCI144WKT | Transistor              |         |
| Q402     | YEANCI144WKT | Transistor              |         |

## 1.2. Diodes

### MAIN/AMP BLOCK [E-6726A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D601     | YEADAN202KTX | Diode                   |         |
| D602     | MA741WATX    | Diode                   |         |
| D603     | YEARD56M3T1  | Diode                   |         |
| D606     | YEADSS14VZ   | Diode                   |         |
| D703     | MA736TX      | Diode                   |         |
| D710     | YEARD56M2T1  | Diode                   |         |
| D711     | MA153TX      | Diode                   |         |
| D712     | YEARD39M2T2  | Diode                   |         |
| D720     | YEARD91M1T2  | Diode                   |         |
| D731     | YEARD91M1T2  | Diode                   |         |
| D732     | MA741WATX    | Diode                   |         |

### DISPLAY BLOCK [E-8589A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D910     | MA8056LMHTX  | Diode                   |         |
| D911     | MA8056LMHTX  | Diode                   |         |
| D912     | MA8056LMHTX  | Diode                   |         |
| D913     | MA8056LMHTX  | Diode                   |         |
| D916     | MA8056LMHTX  | Diode                   |         |
| D920     | LN1271RAL    | LED                     |         |
| D921     | LNJ306G5TUWQ | LED                     |         |
| D922     | LNJ306G5TUWQ | LED                     |         |
| D923     | LNJ306G5TUWQ | LED                     |         |
| D924     | LN1361CTR    | LED                     |         |
| D925     | LN1361CTR    | LED                     |         |
| D926     | LN1361CTR    | LED                     |         |
| D930     | YEARD47M2T1  | Diode                   |         |
| D931     | YEARD51M2T1  | Diode                   |         |
| D932     | MA28T-ATX    | Diode                   |         |

### INTERFACE BLOCK [E-8588B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D401     | LN1461CTR    | LED                     |         |
| D411     | LNJ306G5TUWQ | LED                     |         |
| D412     | LNJ306G5TUWQ | LED                     |         |
| D413     | LNJ306G5TUWQ | LED                     |         |
| D451     | MA151WA      | Diode                   |         |

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|----------|-------------------------|---------|
| D452     | MA151WA  | Diode                   |         |

### 1.3. Capacitors

#### MAIN/AMP BLOCK [E-6726A]

| Ref. No. | Part No.      | Part Name & Description   | Remarks |
|----------|---------------|---------------------------|---------|
| C61      | ECA1AM221B    | Electrolytic, 220µF 10WV  |         |
| C62      | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C63      | YECUS1E333KX  | Ceramic, 0.033µF 25WV     |         |
| C66      | YECUS1E333KX  | Ceramic, 0.033µF 25WV     |         |
| C67      | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C68      | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C291     | YECUS1H122KX  | Ceramic, 0.0012µF 50WV    |         |
| C292     | YECUS1H122KX  | Ceramic, 0.0012µF 50WV    |         |
| C298     | YECUS1CM225R  | Tantalum, 2.2µF 16WV      |         |
| C389     | ECA1CM470I    | Electrolytic, 47µF 16WV   |         |
| C391     | YECUS1H122KX  | Ceramic, 0.0012µF 50WV    |         |
| C392     | YECUS1H122KX  | Ceramic, 0.0012µF 50WV    |         |
| C501     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C502     | YECUS1C474KX  | Ceramic, 0.47µF 16WV      |         |
| C503     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C504     | ECA0JM331I    | Electrolytic, 330µF 6.3WV |         |
| C601     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C602     | ECA1CM470I    | Electrolytic, 47µF 16WV   |         |
| C607     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C608     | YECUS1C104KX  | Ceramic, 0.1µF 16WV       |         |
| C610     | YECUS1H181JM  | Ceramic, 180pF 50WV       |         |
| C611     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C612     | ECA0JM331I    | Electrolytic, 330µF 6.3WV |         |
| C613     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C614     | ECA0JM331I    | Electrolytic, 330µF 6.3WV |         |
| C615     | YECUS1C104KX  | Ceramic, 0.1µF 16WV       |         |
| C616     | YECUS1H180JC  | Ceramic, 18pF 50WV        |         |
| C617     | YECUS1H180JC  | Ceramic, 18pF 50WV        |         |
| C618     | EECS5R5B473   | Electrolytic, 0.047F5.5WV |         |
| C619     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C621     | ECA0JM331I    | Electrolytic, 330µF 6.3WV |         |
| C622     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C623     | ECA1AM221B    | Electrolytic, 220µF 10WV  |         |
| C627     | YECUS1C224KX  | Ceramic, 0.22µF 16WV      |         |
| C628     | YECUS1C224KX  | Ceramic, 0.22µF 16WV      |         |
| C629     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C640     | ECEA1AKA470B  | Electrolytic, 47µF 10WV   |         |
| C641     | YECUS1H102KX  | Ceramic, 0.001µF 50WV     |         |
| C643     | ECA1CM471     | Electrolytic, 470µF 16WV  |         |
| C644     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C645     | ECEA0JKA470B  | Electrolytic, 47µF 6.3WV  |         |
| C646     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C648     | YECUSW0J226MS | Tantalum, 22µF 6.3WV      |         |
| C649     | YECUSW1C105MU | Tantalum, 1µF 16WV        |         |
| C651     | ECA1CM471     | Electrolytic, 470µF 16WV  |         |
| C654     | YECUS1C224KX  | Ceramic, 0.22µF 16WV      |         |
| C655     | YECUS1C224KX  | Ceramic, 0.22µF 16WV      |         |
| C656     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C666     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C680     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C683     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C685     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C698     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C701     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C702     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C703     | ECA1CM471     | Electrolytic, 470µF 16WV  |         |
| C704     | ECA1CM471     | Electrolytic, 470µF 16WV  |         |
| C706     | ECA1CM471B    | Electrolytic, 470µF 16WV  |         |
| C708     | YECUS1C104KX  | Ceramic, 0.1µF 16WV       |         |
| C710     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C711     | ECA1CM101B    | Electrolytic, 100µF 16WV  |         |
| C712     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C713     | YECUS1C334KX  | Ceramic, 0.33µF 16WV      |         |
| C714     | ECA1AM221B    | Electrolytic, 220µF 10WV  |         |
| C715     | YECUS1C104KX  | Ceramic, 0.1µF 16WV       |         |
| C717     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |

| Ref. No. | Part No.      | Part Name & Description   | Remarks |
|----------|---------------|---------------------------|---------|
| C718     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C720     | ECA1CM470I    | Electrolytic, 47µF 16WV   |         |
| C721     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C722     | ECA0JM101B    | Electrolytic, 100µF 6.3WV |         |
| C725     | ECA1AM221I    | Electrolytic, 220µF 10WV  |         |
| C726     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C727     | YECUZ1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C731     | ECA1CDT102BQ  | Electrolytic, 1000µF 16WV |         |
| C732     | YECUS1C334KX  | Ceramic, 0.33µF 16WV      |         |
| C733     | YECUSW1C686MD | Tantalum, 68µF 16WV       |         |
| C734     | YECUSW1E226MD | Tantalum, 22µF 25WV       |         |
| C736     | YECUSW1E226MD | Tantalum, 22µF 25WV       |         |
| C742     | YECUS1C334KX  | Ceramic, 0.33µF 16WV      |         |
| C743     | YECUSW1C686MD | Tantalum, 68µF 16WV       |         |
| C744     | YECUSW1E226MD | Tantalum, 22µF 25WV       |         |
| C746     | YECUSW1E226MD | Tantalum, 22µF 25WV       |         |
| C747     | ECA1AM221B    | Electrolytic, 220µF 10WV  |         |
| C748     | ECA1AM471     | Electrolytic, 470µF 10WV  |         |
| C749     | YECUS1C104KX  | Ceramic, 0.1µF 16WV       |         |
| C751     | YECUS1H103KX  | Ceramic, 0.01µF 50WV      |         |
| C761     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C762     | YECUS1E104ZF  | Ceramic, 0.1µF 25WV       |         |
| C763     | ECA1CDT222U   | Electrolytic, 2200µF 16WV |         |
| C764     | ECA1CDT222U   | Electrolytic, 2200µF 16WV |         |

#### DSP BLOCK [E-8587B]

| Ref. No. | Part No.      | Part Name & Description | Remarks |
|----------|---------------|-------------------------|---------|
| C205     | YECUSV1AM475R | Tantalum, 4.7µF 10WV    |         |
| C208     | YECUZ1H270JC  | Ceramic, 27pF 50WV      |         |
| C212     | YECUSV1AM335R | Tantalum, 3.3µF 10WV    |         |
| C216     | YECUSW1C106MS | Tantalum, 10µF 16WV     |         |
| C217     | YECUZ1H181JC  | Ceramic, 180pF 50WV     |         |
| C218     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C219     | YECUZ1E104ZF  | Ceramic, 0.1µF 25WV     |         |
| C220     | YECUZ1H181JC  | Ceramic, 180pF 50WV     |         |
| C221     | YECUZ1H470JC  | Ceramic, 47pF 50WV      |         |
| C223     | YECUSW1E226MD | Tantalum, 22µF 25WV     |         |
| C224     | YECUSW1E226MD | Tantalum, 22µF 25WV     |         |
| C225     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C226     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C229     | YECUZ1H561KX  | Ceramic, 560pF 50WV     |         |
| C233     | YECUZ1H270JC  | Ceramic, 27pF 50WV      |         |
| C235     | YECUZ1H561KX  | Ceramic, 560pF 50WV     |         |
| C240     | YECUZ1H270JC  | Ceramic, 27pF 50WV      |         |
| C241     | YECUZ1H561KX  | Ceramic, 560pF 50WV     |         |
| C242     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C243     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C244     | YECUZ1H103KX  | Ceramic, 0.01µF 50WV    |         |
| C245     | YECUZ1H221JC  | Ceramic, 220pF 50WV     |         |
| C246     | YECUZ1H221JC  | Ceramic, 220pF 50WV     |         |
| C247     | YECUZ1H182KX  | Ceramic, 0.0018µF 50WV  |         |
| C248     | YECUZ1H122KX  | Ceramic, 0.0012µF 50WV  |         |
| C249     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C250     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C271     | YECUZ1H181JC  | Ceramic, 180pF 50WV     |         |
| C272     | YECUSW1A106MA | Tantalum, 10µF 10WV     |         |
| C273     | YECUZ1H181JC  | Ceramic, 180pF 50WV     |         |
| C281     | YECUSW1E226MD | Tantalum, 22µF 25WV     |         |
| C282     | YECUSW1D224MU | Tantalum, 0.22µF 20WV   |         |
| C283     | YECUSW1D224MU | Tantalum, 0.22µF 20WV   |         |
| C299     | YECUZ1H330JC  | Ceramic, 33pF 50WV      |         |
| C300     | YECUSW1C476MT | Tantalum, 47µF 16WV     |         |
| C301     | YECUZ1E104ZF  | Ceramic, 0.1µF 25WV     |         |
| C302     | YECUZ1C104KX  | Ceramic, 0.1µF 16WV     |         |
| C303     | YECUSW1C476MT | Tantalum, 47µF 16WV     |         |
| C305     | YECUSV1AM475R | Tantalum, 4.7µF 10WV    |         |
| C308     | YECUZ1H270JC  | Ceramic, 27pF 50WV      |         |
| C309     | YECUSW1E226MD | Tantalum, 22µF 25WV     |         |
| C310     | YECUZ1E104ZF  | Ceramic, 0.1µF 25WV     |         |
| C312     | YECUSV1AM335R | Tantalum, 3.3µF 10WV    |         |
| C314     | YECUSW1E226MD | Tantalum, 22µF 25WV     |         |
| C315     | YECUZ1H103KX  | Ceramic, 0.01µF 50WV    |         |
| C317     | YECUZ1H181JC  | Ceramic, 180pF 50WV     |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C318     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C320     | YECUZ1H181JC | Ceramic, 180pF 50WV     |         |
| C321     | YECUZ1H470JC | Ceramic, 47pF 50WV      |         |
| C323     | YECUZ1H103KX | Ceramic, 0.01pF 50WV    |         |
| C324     | YECUZ1H103KX | Ceramic, 0.01pF 50WV    |         |
| C325     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C326     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C329     | YECUZ1H561KX | Ceramic, 560pF 50WV     |         |
| C332     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C333     | YECUZ1H270JC | Ceramic, 27pF 50WV      |         |
| C335     | YECUZ1H561KX | Ceramic, 560pF 50WV     |         |
| C336     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C337     | YECUZ1H103KX | Ceramic, 0.01pF 50WV    |         |
| C338     | YECSW1C476MT | Tantalum, 47pF 16WV     |         |
| C340     | YECUZ1H270JC | Ceramic, 27pF 50WV      |         |
| C341     | YECUZ1H561KX | Ceramic, 560pF 50WV     |         |
| C342     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C343     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C345     | YECUZ1H221JC | Ceramic, 220pF 50WV     |         |
| C346     | YECUZ1H221JC | Ceramic, 220pF 50WV     |         |
| C347     | YECUZ1H182KX | Ceramic, 0.0018pF 50WV  |         |
| C348     | YECUZ1H122KX | Ceramic, 0.0012pF 50WV  |         |
| C349     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C350     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C371     | YECUZ1H181JC | Ceramic, 180pF 50WV     |         |
| C372     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C373     | YECUZ1H181JC | Ceramic, 180pF 50WV     |         |
| C382     | YECSW1D224MU | Tantalum, 0.22pF 20WV   |         |
| C383     | YECSW1D224MU | Tantalum, 0.22pF 20WV   |         |
| C399     | YECUZ1H330JC | Ceramic, 33pF 50WV      |         |
| C637     | YECUZ1H103KX | Ceramic, 0.01pF 50WV    |         |
| C647     | YECSW1C226MC | Tantalum, 22pF 16WV     |         |
| C660     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C661     | YECSW1C475MA | Tantalum, 4.7pF 16WV    |         |
| C662     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C663     | YECSW1C475MA | Tantalum, 4.7pF 16WV    |         |
| C664     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C665     | F3H1D4760001 | Tantalum, 47pF 20WV     |         |
| C671     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C672     | YECSW1C475MA | Tantalum, 4.7pF 16WV    |         |
| C673     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C674     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C675     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C676     | F3H1D4760001 | Tantalum, 47pF 20WV     |         |
| C752     | YECSW1C226MC | Tantalum, 22pF 16WV     |         |
| C753     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C756     | YECSW1A226MS | Tantalum, 22pF 10WV     |         |
| C757     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C801     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C802     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C803     | YECUZ1H220JC | Ceramic, 22pF 50WV      |         |
| C804     | YECUZ1H220JC | Ceramic, 22pF 50WV      |         |
| C805     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C806     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C807     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C808     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C809     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C810     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C811     | YECSW1C686MD | Tantalum, 68pF 16WV     |         |
| C812     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C813     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C814     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C815     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C816     | YECSW1C106MS | Tantalum, 10pF 16WV     |         |
| C823     | YECSW1C106MS | Tantalum, 10pF 16WV     |         |
| C824     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C825     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C826     | YECUZ1H332KX | Ceramic, 0.033pF 50WV   |         |
| C827     | YECUZ1H332KX | Ceramic, 0.03pF 50WV    |         |
| C828     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C850     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C851     | YECSW1C476MT | Tantalum, 47pF 16WV     |         |
| C858     | YECSW1E226MD | Tantalum, 22pF 25WV     |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C859     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C860     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C861     | YECSW1C686MD | Tantalum, 68pF 16WV     |         |
| C867     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C868     | YECUZ1E104ZF | Ceramic, 0.1pF 25WV     |         |
| C869     | YECSW1C686MD | Tantalum, 68pF 16WV     |         |
| C872     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C874     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C876     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |
| C878     | YECSW1A106MA | Tantalum, 10pF 10WV     |         |

## DISPLAY BLOCK [E-8589A]

| Ref. No. | Part No.      | Part Name & Description     | Remarks |
|----------|---------------|-----------------------------|---------|
| C901     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C902     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C903     | YECUS1H681JM  | Ceramic, 680pF 50WV         |         |
| C904     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C905     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C906     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C907     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C908     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C909     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C914     | YECUS1H221JM  | Ceramic, 220pF 50WV         |         |
| C931     | ECEV1CA220SR  | Electrolytic, 22pF 16WV     |         |
| C932     | YECUS1C104KX  | Ceramic, 0.1pF 16WV         |         |
| C933     | YECUM2A683JN  | Plastic Film, 0.068pF 100WV |         |
| C941     | YECUS1C224KX  | Ceramic, 0.22pF 16WV        |         |
| C942     | YECUS1C224KX  | Ceramic, 0.22pF 16WV        |         |
| C943     | YECUS1H102JM  | Ceramic, 0.001pF 50WV       |         |
| C944     | YECUSV1EM105R | Tantalum, 1pF 25WV          |         |
| C945     | YECUSV1CM225R | Tantalum, 2.2pF 16WV        |         |

## INTERFACE BLOCK [E-8588B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C400     | YECUS1C104KX | Ceramic, 0.1pF 16WV     |         |
| C401     | YECUS1C104KX | Ceramic, 0.1pF 16WV     |         |
| C411     | YECUS1C334KX | Ceramic, 0.33pF 16WV    |         |
| C412     | YECUS1E226MD | Tantalum, 22pF 25WV     |         |
| C413     | YECUS1C104KX | Ceramic, 0.1pF 16WV     |         |
| C421     | YECUS1C104KX | Ceramic, 0.1pF 16WV     |         |

## 1.4. Resistors

## MAIN/AMP BLOCK [E-6726A]

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R62      | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R63      | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R66      | ERJ6GEYJ822  | Chip, 8.2k $\Omega$ 1/10W |         |
| R68      | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R101     | ERJ8GEYJ5R6V | Chip, 5.6k $\Omega$ 1/8W  |         |
| R401     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R402     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R404     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R406     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R501     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R504     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R511     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R568     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R570     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R600     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R601     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R602     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R603     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R604     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R605     | ERJ3GEYJ154V | Chip, 150k $\Omega$ 1/16W |         |
| R606     | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R608     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R612     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R614     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R615     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R616     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R617     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R618     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R619     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R620     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R621     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R622     | ERJ6GEYJ563  | Chip, 56k $\Omega$ 1/10W  |         |
| R623     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R626     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R627     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R628     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R631     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R632     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R633     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R634     | ERJ14YJ100H  | Chip, 10 $\Omega$ 1/4W    |         |
| R636     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R637     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R638     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R639     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R640     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R641     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R642     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R643     | ERJ6GEYJ104  | Chip, 100k $\Omega$ 1/10W |         |
| R644     | ERJ6GEYJ104  | Chip, 100k $\Omega$ 1/10W |         |
| R648     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R649     | ERJ6GEYJ223  | Chip, 22k $\Omega$ 1/10W  |         |
| R650     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R651     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R652     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R653     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R657     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R660     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R661     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R663     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R664     | ERJ6GEYJ332  | Chip, 3.3k $\Omega$ 1/10W |         |
| R665     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R666     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R673     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R674     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R675     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R677     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R678     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R679     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R680     | ERJ6GEYJ102  | Chip, 1k $\Omega$ 1/10W   |         |
| R681     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R682     | ERJ3GEYJ362V | Chip, 3.6k $\Omega$ 1/16W |         |
| R683     | ERJ3GEYJ362V | Chip, 3.6k $\Omega$ 1/16W |         |
| R684     | ERJ3GEYJ362V | Chip, 3.6k $\Omega$ 1/16W |         |
| R688     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R689     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R690     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R694     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R695     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R696     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R697     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R698     | ERJ6GEYJ224  | Chip, 220k $\Omega$ 1/10W |         |
| R699     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R701     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R702     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R706     | ERJ12YJ681H  | Chip, 680 $\Omega$ 1/2W   |         |
| R707     | ERJ12YJ681H  | Chip, 680 $\Omega$ 1/2W   |         |
| R709     | ERJ12YJ4R7H  | Chip, 4.7 $\Omega$ 1/2W   |         |
| R711     | ERJ6GEYJ152  | Chip, 1.5k $\Omega$ 1/10W |         |
| R712     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R713     | ERJ6GEYJ332  | Chip, 3.3k $\Omega$ 1/10W |         |
| R714     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |
| R720     | ERJ14YJ100H  | Chip, 10 $\Omega$ 1/4W    |         |
| R721     | ERJ6GEYJ103  | Chip, 10k $\Omega$ 1/10W  |         |
| R730     | ERJ12YJ4R7H  | Chip, 4.7 $\Omega$ 1/2W   |         |
| R731     | ERJ6GEYJ331  | Chip, 330 $\Omega$ 1/10W  |         |
| R734     | ERJ6GEYJ473  | Chip, 47k $\Omega$ 1/10W  |         |

## DSP BLOCK IE-8587B1

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R60      | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R61      | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R64      | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R65      | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R206     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R208     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R209     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R210     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R211     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R212     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R213     | ERJ3GEYJ123V | Chip, 12k $\Omega$ 1/16W  |         |
| R214     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R215     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R216     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R217     | ERJ3GEYJ183V | Chip, 18k $\Omega$ 1/16W  |         |
| R219     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R220     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R221     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R222     | ERJ3GEYJ432V | Chip, 4.3k $\Omega$ 1/16W |         |
| R223     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R224     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R225     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R226     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R227     | ERJ3GEYJ106V | Chip, 10M $\Omega$ 1/16W  |         |
| R232     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R234     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R235     | ERJ3GEYJ822V | Chip, 8.2k $\Omega$ 1/16W |         |
| R238     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R240     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R241     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R242     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R245     | ERJ3GEYJ561V | Chip, 560 $\Omega$ 1/16W  |         |
| R247     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R256     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R260     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R264     | ERJ3GEYJ682V | Chip, 6.8k $\Omega$ 1/16W |         |
| R265     | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R268     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R269     | ERJ3GEYJ331V | Chip, 330 $\Omega$ 1/16W  |         |
| R270     | ERJ3GEYJ154V | Chip, 150k $\Omega$ 1/16W |         |
| R271     | ERJ3GEYJ154V | Chip, 150k $\Omega$ 1/16W |         |
| R274     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R275     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R278     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R279     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R281     | ERJ3GEYJ183V | Chip, 18k $\Omega$ 1/16W  |         |
| R282     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R300     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R301     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R302     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R306     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R310     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R311     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R312     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R313     | ERJ3GEYJ123V | Chip, 12k $\Omega$ 1/16W  |         |
| R314     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R315     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R316     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R317     | ERJ3GEYJ183V | Chip, 18k $\Omega$ 1/16W  |         |
| R318     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R319     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R320     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R321     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R322     | ERJ3GEYJ432V | Chip, 4.3k $\Omega$ 1/16W |         |
| R323     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R324     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R325     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R326     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R327     | ERJ3GEYJ106V | Chip, 10M $\Omega$ 1/16W  |         |
| R332     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R334     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R335     | ERJ3GEYJ822V | Chip, 8.2k $\Omega$ 1/16W |         |



| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R336     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R337     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R338     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R342     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R345     | ERJ3GEYJ561V | Chip, 560 $\Omega$ 1/16W  |         |
| R347     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R356     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R360     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R364     | ERJ3GEYJ682V | Chip, 6.8k $\Omega$ 1/16W |         |
| R365     | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R368     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R369     | ERJ3GEYJ331V | Chip, 330 $\Omega$ 1/16W  |         |
| R370     | ERJ3GEYJ154V | Chip, 150k $\Omega$ 1/16W |         |
| R371     | ERJ3GEYJ154V | Chip, 150k $\Omega$ 1/16W |         |
| R374     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R375     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R378     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R379     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R381     | ERJ3GEYJ183V | Chip, 18k $\Omega$ 1/16W  |         |
| R382     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R610     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R611     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R613     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R625     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R646     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R647     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R654     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R655     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R656     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R659     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R667     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R668     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R669     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R670     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R671     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R672     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R676     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R685     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R686     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R687     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R691     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R692     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R693     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R803     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R804     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R808     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R809     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R810     | ERJ3GEYJ331V | Chip, 330 $\Omega$ 1/16W  |         |
| R850     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R851     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |

DISPLAY BLOCK [E-8589A]

| Ref. No. | Part No.    | Part Name & Description   | Remarks |
|----------|-------------|---------------------------|---------|
| R900     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R901     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R902     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R903     | ERJ6GEYJ433 | Chip, 43k $\Omega$ 1/10W  |         |
| R905     | ERJ6GEYJ103 | Chip, 10k $\Omega$ 1/10W  |         |
| R906     | ERJ6GEYJ103 | Chip, 10k $\Omega$ 1/10W  |         |
| R907     | ERJ6GEYJ103 | Chip, 10k $\Omega$ 1/10W  |         |
| R910     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R911     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R912     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R913     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |
| R914     | ERJ6GEYJ333 | Chip, 33k $\Omega$ 1/10W  |         |
| R920     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R921     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R922     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R923     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R930     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R931     | ERJ6GEYJ271 | Chip, 270 $\Omega$ 1/10W  |         |
| R932     | ERJ6GEYJ271 | Chip, 270 $\Omega$ 1/10W  |         |
| R935     | ERJ6GEYJ332 | Chip, 3.3k $\Omega$ 1/10W |         |

| Ref. No. | Part No.    | Part Name & Description   | Remarks |
|----------|-------------|---------------------------|---------|
| R936     | ERJ6GEYJ332 | Chip, 3.3k $\Omega$ 1/10W |         |
| R942     | ERJ6GEYJ101 | Chip, 100 $\Omega$ 1/10W  |         |
| R943     | ERJ6GEYJ561 | Chip, 560 $\Omega$ 1/10W  |         |
| R944     | ERJ6GEYJ271 | Chip, 270 $\Omega$ 1/10W  |         |

INTERFACE BLOCK [E-8588B]

| Ref. No. | Part No.    | Part Name & Description   | Remarks |
|----------|-------------|---------------------------|---------|
| R400     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R403     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R405     | ERJ6GEYJ101 | Chip, 100 $\Omega$ 1/10W  |         |
| R407     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R408     | ERJ6GEYJ102 | Chip, 1k $\Omega$ 1/10W   |         |
| R410     | ERJ6GEYJ184 | Chip, 180k $\Omega$ 1/10W |         |
| R421     | ERJ6GEYJ103 | Chip, 10k $\Omega$ 1/10W  |         |
| R422     | ERJ6GEYJ104 | Chip, 100k $\Omega$ 1/10W |         |
| R423     | ERJ6GEYJ273 | Chip, 27k $\Omega$ 1/10W  |         |
| R424     | ERJ6GEYJ472 | Chip, 4.7k $\Omega$ 1/10W |         |
| R431     | ERJ6GEYJ152 | Chip, 1.5k $\Omega$ 1/10W |         |
| R432     | ERJ6GEYJ271 | Chip, 270 $\Omega$ 1/10W  |         |
| R451     | ERJ6GEYJ473 | Chip, 47k $\Omega$ 1/10W  |         |

## 1.5. Connectors

MAIN/AMP BLOCK [E-6726A]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| CN251    | YEA9230B109  | Connector, 9P           |         |
| CN253    | YEA9230B115  | Connector, 15P          |         |
| CN501    | YEAETKCF14PS | Connector, 14P          |         |
| CN601    | YEA012809    | Connector, 8P           |         |
| CN705    | YEA012748    | Connector, 16P          |         |
| CP251    | YEA9120S09   | Connector, 9P           |         |
| CP252    | YEAETKCF10QS | Connector, 10P          |         |
| CP253    | YEA9120S15   | Connector, 15P          |         |
| CP651    | YEAETKCF18QS | Connector, 18P          |         |
| CP652    | YEAETKCF18QS | Connector, 18P          |         |

DSP BLOCK [E-8587B]

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| CN202    | K2KY49Z00001 | Connector, RCA $\times$ 2 |         |
| CN203    | YEA012571    | Connector, RCA $\times$ 2 |         |
| CN252    | YEAETKCF10PS | Connector, 10P            |         |
| CN303    | YEA012571    | Connector, RCA $\times$ 2 |         |
| CN304    | K2KY49Z00001 | Connector, RCA $\times$ 2 |         |
| CN603    | YEA5227114   | Connector, 14P            |         |
| CN604    | YEA5220714   | Connector, 14P            |         |
| CN651    | YEAETKCF18RS | Connector, 18P            |         |
| CN652    | YEAETKCF18RS | Connector, 18P            |         |

INTERFACE BLOCK [E-8588B]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| CP501    | YEAETKCF14XS | Connector, 14P          |         |

## 1.6. Electric Parts

SWITCHES

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| SW901    | K0H1BA000083 | Switch                  |         |
| SW902    | K0H1BA000083 | Switch                  |         |
| SW903    | K0H1BA000083 | Switch                  |         |
| SW904    | K0H1BA000083 | Switch                  |         |
| SW905    | K0H1BA000083 | Switch                  |         |
| SW906    | K0H1BA000083 | Switch                  |         |
| SW907    | K0H1BA000083 | Switch                  |         |
| SW908    | K0H1BA000083 | Switch                  |         |
| SW909    | K0H1BA000083 | Switch                  |         |
| SW910    | K0H1BA000083 | Switch                  |         |
| SW911    | K0H1BA000083 | Switch                  |         |
| SW912    | K0H1BA000083 | Switch                  |         |
| SW913    | K0H1BA000083 | Switch                  |         |
| SW914    | K0H1BA000083 | Switch                  |         |

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| SW915    | K0H1BA000083 | Switch                  |         |
| SW916    | K0H1BA000083 | Switch                  |         |
| SW917    | K0H1BA000083 | Switch                  |         |
| SW918    | K0H1BA000083 | Switch                  |         |
| SW400    | YEAS09304    | Switch                  |         |
| SW401    | YEAS09304    | Switch                  |         |
| SW402    | YEAS09304    | Switch                  |         |
| SW403    | K0F111A00083 | Switch                  |         |

## CRYSTALS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| XL501    | YEXLCR838M5T | Crystal OSC             |         |
| XL602    | YEXL49U0419  | Crystal OSC             |         |
| XL801    | YEXL49U21477 | Crystal OSC             |         |

## COILS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| L52      | YELTBLM21A10 | Coil                    |         |
| L61      | YELTBLM21A10 | Coil                    |         |
| L62      | YELTBLM21A10 | Coil                    |         |
| L101     | YELT03A330KT | Coil                    |         |
| L501     | YELT03N101JT | Coil                    |         |
| L601     | YELT03N101JT | Coil                    |         |
| L602     | YELT03N101JT | Coil                    |         |
| L604     | YELT03N101JT | Coil                    |         |
| L611     | YELTBLM21A10 | Coil                    |         |
| L621     | YELTBLM21A10 | Coil                    |         |
| L706     | YELT03N101JT | Coil                    |         |
| L707     | ELEY330KA    | Coil                    |         |
| L711     | YELTBLM21A10 | Coil                    |         |
| L712     | G1CYYYZ00003 | Coil                    |         |
| L713     | G1CYYYZ00003 | Coil                    |         |
| L721     | YELTBLM21A10 | Coil                    |         |
| L201     | YELTBLM21A10 | Coil                    |         |
| L203     | YELTBLM21A10 | Coil                    |         |
| L205     | YELTBLM1B601 | Coil                    |         |
| L206     | YELTBLM1B601 | Coil                    |         |
| L210     | G1CYYYZ00003 | Coil                    |         |
| L211     | YELTBLM1B601 | Coil                    |         |
| L301     | YELTBLM21A10 | Coil                    |         |
| L302     | YELTBLM21A10 | Coil                    |         |
| L303     | YELTBLM21A10 | Coil                    |         |
| L305     | YELTBLM1B601 | Coil                    |         |
| L306     | YELTBLM1B601 | Coil                    |         |
| L310     | G1CYYYZ00003 | Coil                    |         |
| L311     | YELTBLM1B601 | Coil                    |         |
| L701     | YELT03N101JT | Coil                    |         |
| L702     | YELT03N101JT | Coil                    |         |
| L704     | YELT03N2R7KT | Coil                    |         |
| L751     | G1CYYYZ00003 | Coil                    |         |
| L752     | G1CYYYZ00003 | Coil                    |         |
| L801     | YELTBLM21A10 | Coil                    |         |
| L802     | YELTBLM21A10 | Coil                    |         |
| L803     | YELTBLM21A10 | Coil                    |         |
| L804     | YELTBLM21A10 | Coil                    |         |
| L805     | YELTBLM21A10 | Coil                    |         |
| L806     | YELTBLM21A10 | Coil                    |         |
| L807     | G1CYYYZ00003 | Coil                    |         |
| L808     | G1CYYYZ00003 | Coil                    |         |
| L931     | YELTD75F101T | Coil                    |         |
| L932     | YELT216825TG | Coil                    |         |

## LCD

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| LCD901   | L5ACCLC00001 | LCD Display             |         |

## LAMPS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| Z51      | YEAL02010T   | Neon Lamp               |         |
| CFL931   | A2CA00000003 | Display Tube            |         |

## THERMISTORS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| PH701    | YERT7AR4R7MT | Thermistor              |         |
| PH702    | YERT7AR4R7MT | Thermistor              |         |

## 1.7. Accessories

## PRINTING

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
|          | YEFM283318 | Operating Instructions  |         |

## INSTALLATION PARTS

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
|          | YEAJ02802   | Power Cord              |         |
|          | CR2032/1F   | Battery                 |         |
|          | YEP9FZ2714  | Screws                  |         |
|          | YEF131302   | Case, Detachable Unit   |         |
|          | YEF04019    | Rear Support Strap      |         |
|          | YEFX9992008 | Remote Controller       |         |
|          | YEFX0214198 | Mounting Collar         |         |

## 1.8. Mechanical Parts

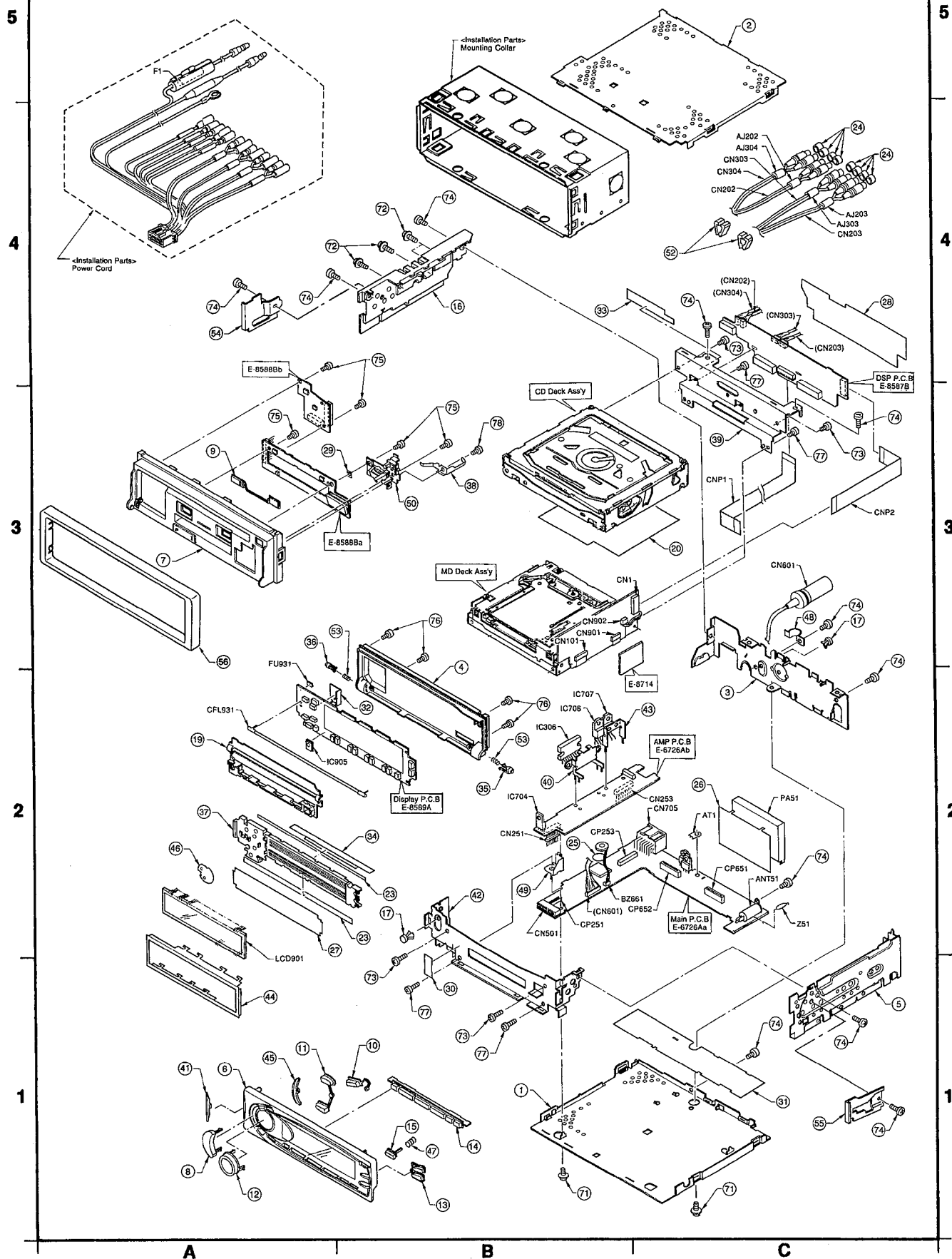
## MISCELLANEOUS

| Ref. No. | Part No.      | Part Name & Description      | Remarks        |
|----------|---------------|------------------------------|----------------|
| F1       | XBB1F100NS5   | Fuse, 10A                    |                |
| FU931    | YEAFFSSFCOR4A | Fuse, 0.4A                   |                |
| AJ202    | YEAJ8VW3509   | Tube, PRE-OUT                |                |
| AJ203    | YEAJ8VW3504   | Tube, CD/MD.C-IN             |                |
| AJ303    | YEAJ8VW3503   | Tube, AUX-IN                 |                |
| AJ304    | YEAJ8VW3002   | Tube, REAR                   |                |
| ANT51    | YEA10060      | Antenna Receptacle           |                |
| AT1      | K4ZZ01000048  | Terminal                     |                |
| BZ661    | YEXBPKM354A9  | Buzzer                       |                |
| CNP1     | K1MN14B00027  | Connector, 14P               |                |
| CNP2     | YEAET14B100A  | Connector, 14P               |                |
| 1        | YEFA05733     | Bottom Cover                 | (1-B)          |
| 2        | YEFA031673    | Upper Cover                  | (5-C)          |
| 3        | YEFA08477     | Rear Plate                   | (2-C)          |
| 4        | YEFA131439    | Cover, Detachable            | (2-B)          |
| 5        | YEFA09630     | Side Plate                   | (1-C)          |
| 6        | YEF026326     | Escutcheon Ass'y, Detachable | (1-A)          |
| 7        | YEF026327     | Escutcheon Ass'y, Unit       | (3-A)          |
| 8        | YEF0135435    | Button, VOL                  | (1-A)          |
| 9        | YEF0135487    | Button, EJECT                | (3-A)          |
| 10       | YEF0135436    | Button, SEL                  | (1-B)          |
| 11       | YEF0135437    | Button, RAND/SOURCE          | (1-A)          |
| 12       | YEF0135439    | Button, TUNE/TRACK           | (1-A)          |
| 13       | YEF0135440    | Button, DIMMER/DISP          | (1-B)          |
| 14       | YEF0135531A   | Button, PRESET               | (1-B)          |
| 15       | YEF0135486    | Button, OPEN A               | (1-B)          |
| 16       | YEFF01964     | Heat Sink                    | (4-B)          |
| 17       | YEFJ05030     | Color Rivet                  | (2-B)<br>(3-C) |
| 19       | YEFK06851     | Holder, LCD                  | (2-A)          |
| 20       | YEF02635      | Spacer                       | (3-C)          |
| 23       | YEF07107      | Rubber Contact               | (2-B)          |
| 24       | YEF04187      | Lead Cap                     | (4-C)          |
| 25       | YEF01512      | Pad                          | (2-B)          |
| 26       | YEF03526      | Magnetic Shield, PA51        | (2-C)          |
| 27       | YEF021599     | Optical Shade                | (2-A)          |
| 28       | YEF03494      | Magnetic Shield, CD          | (4-C)          |
| 29       | YEF011960     | Insulator, Display           | (3-A)          |
| 30       | YEF011961     | Insulator, Main              | (1-B)          |
| 31       | YEF011963     | Insulator                    | (1-C)          |
| 32       | YEF03500      | Magnetic Shield              | (2-B)          |
| 33       | YEF011962     | Insulator                    | (4-B)          |
| 34       | YEF021600     | Optical Shade                | (2-B)          |
| 35       | YEFW04156     | Shaft Collar(L)              | (2-B)          |
| 36       | YEFW04157     | Shaft Collar(R)              | (3-A)          |

| Ref. No. | Part No.     | Part Name & Description  | Remarks        |
|----------|--------------|--------------------------|----------------|
| 37       | YEFX0011912A | Transparent Plate        | (2-A)          |
| 38       | YEFX0052405A | Spring                   | (3-B)          |
| 39       | YEFX0214641A | Bracket, Deck (R)        | (3-C)          |
| 40       | YEFX0214643  | Bracket, IC              | (2-B)          |
| 41       | YEFX0011904  | Transparent Plate        | (1-A)          |
| 42       | YEFX0214642  | Bracket, Deck (F)        | (2-B)          |
| 43       | YEFX0214644  | Bracket, Regulator       | (2-C)          |
| 44       | YEFX0214645  | Bracket, LCD             | (1-A)          |
| 45       | YEFX0011905  | Transparent Plate        | (1-A)          |
| 46       | YEFX025137A  | Color Screen             | (2-A)          |
| 47       | YEFX0052396  | Spring                   | (1-B)          |
| 48       | YEFX007146   | Cord Clamper             | (3-C)          |
| 49       | YEFX0214678  | Bracket                  | (2-B)          |
| 50       | YEP9FX084    | Hook Bracket Ass'y       | (3-B)          |
| 52       | YEFX007565   | Cord Clamper             | (4-C)          |
| 53       | YEFX0052253  | Spring                   | (2-B)<br>(3-B) |
| 54       | YEFX0214786  | Bracket (L)              | (4-A)          |
| 55       | YEFX0214282  | Bracket (R)              | (1-C)          |
| 56       | YEFX05569    | Trim Plate               | (3-A)          |
| 71       | YEJT03009    | Tapping Screw, 3mm*8mm   | (1-B)<br>(1-C) |
| 72       | YEJS05030    | Screw, 3mm*12mm          | (4-B)          |
| 73       | YEJT03131    | Tapping Screw, 2.6mm*5mm |                |
| 74       | XTB3+6FFX    | Tapping Screw, 3mm*6mm   |                |
| 75       | XTB2+5GFX    | Tapping Screw, 2mm*5mm   |                |
| 76       | XTN2+8GFZ    | Tapping Screw, 2mm*8mm   | (2-B)<br>(3-B) |
| 77       | XSB26+4FZ    | Screw, 2.6mm*4mm         |                |
| 78       | XTB2+6GFX    | Tapping Screw, 2mm*6mm   | (3-B)          |

## EXPLODED VIEW (UNIT)

Numbers in ○ are indicated REF. No. in the REPLACEMENT PARTS LIST



## 2 CD Player Parts

Note :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.

### 2.1. IC's and Transistors

CD SERVO BLOCK [E-8400]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC101    | YEAMCXA2535N | IC                      |         |
| IC201    | YEAMCXD2587Q | IC                      |         |
| IC451    | YEAMM471377M | IC                      |         |
| IC901    | YEAMBA6840AF | IC                      |         |
| IC951    | YEAMBA5971FP | IC                      |         |
| Q101     | 2SB766ATX    | Transistor              |         |
| Q401     | YEANA114EKT  | Transistor              |         |

DISC GUIDE FPC BLOCK [E-2637]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|----------|-------------------------|---------|
| Q1       | PN147    | Transistor              |         |
| Q2       | PN147    | Transistor              |         |
| Q3       | PN147    | Transistor              |         |
| Q4       | PN147    | Transistor              |         |
| Q5       | PN147    | Transistor              |         |

### 2.2. Diodes

CD SERVO BLOCK [E-8400]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D401     | YEAD1SS355T1 | Diode                   |         |
| D402     | MA151ATX     | Diode                   |         |
| D451     | MA151WKT     | Diode                   |         |
| D901     | LN1271RAL    | LED                     |         |
| D902     | LN1271RAL    | LED                     |         |
| D903     | LN1271RAL    | LED                     |         |
| D904     | LN1271RAL    | LED                     |         |
| D905     | LN1271RAL    | LED                     |         |

### 2.3. Capacitors

CD SERVOBLOCK [E-8400]

| Ref. No. | Part No.     | Part Name & Description       | Remarks |
|----------|--------------|-------------------------------|---------|
| C101     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C102     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C104     | YECV0JT226L  | Tantalum, 22 $\mu$ F 6.3WV    |         |
| C105     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C106     | YECUZ1H101JC | Ceramic, 100pF 50WV           |         |
| C107     | YECUS1C105ZF | Ceramic, 1 $\mu$ F 16WV       |         |
| C108     | YECUZ1H330JC | Ceramic, 33pF 50WV            |         |
| C109     | YECUZ1H390JM | Ceramic, 39pF 50WV            |         |
| C110     | YECUZ1H102KX | Ceramic, 0.001 $\mu$ F 50WV   |         |
| C111     | YECV1CT106R  | Ceramic, 10 $\mu$ F 16WV      |         |
| C112     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C113     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C114     | YECUZ1H152KX | Ceramic, 0.0015 $\mu$ F 50WV  |         |
| C115     | YECUZ1H331JM | Ceramic, 330pF 50WV           |         |
| C116     | YECUZ1H472KX | Ceramic, 0.0047 $\mu$ F 50WV  |         |
| C117     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C118     | YECUZ1H030CC | Ceramic, 3pF 50WV             |         |
| C120     | EEFCD0K8R2R  | Electrolytic, 8.2 $\mu$ F 8WV |         |

| Ref. No.  | Part No.     | Part Name & Description       | Remarks |
|-----------|--------------|-------------------------------|---------|
| C401      | YECV1CT106R  | Ceramic, 10 $\mu$ F 16WV      |         |
| C402      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C403      | YECUZ1C473KX | Ceramic, 0.047 $\mu$ F 16WV   |         |
| C404      | YECUZ1H152KX | Ceramic, 0.0015 $\mu$ F 50WV  |         |
| C405      | YECUZ1H221JM | Ceramic, 220pF 50WV           |         |
| C406      | YECUS1C474KX | Ceramic, 0.47 $\mu$ F 16WV    |         |
| C407      | YECUZ1E103KX | Ceramic, 0.01 $\mu$ F 25WV    |         |
| C408      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C410      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C411      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C413      | YECV1CT106R  | Tantalum, 10 $\mu$ F 16WV     |         |
| C414      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C453      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C454      | YECV1CT106R  | Tantalum, 10 $\mu$ F 16WV     |         |
| C455      | YECUZ1E103KX | Ceramic, 0.01 $\mu$ F 25WV    |         |
| C901      | YECUZ1E103KX | Ceramic, 0.01 $\mu$ F 25WV    |         |
| C902      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C903      | ECHE1CVC220F | Electrolytic, 22 $\mu$ F 16WV |         |
| C906      | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C951      | YECUZ1H222KX | Ceramic, 0.0022 $\mu$ F 50WV  |         |
| C952      | YECUZ1H222KX | Ceramic, 0.0022 $\mu$ F 50WV  |         |
| C953      | YECUZ1H222KX | Ceramic, 0.0022 $\mu$ F 50WV  |         |
| C954      | YECUZ1H222KX | Ceramic, 0.0022 $\mu$ F 50WV  |         |
| C955      | ECHE1CVC220F | Electrolytic, 22 $\mu$ F 16WV |         |
| C956, 957 | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV     |         |
| C958, 959 | YECUZ1C333KX | Ceramic, 0.033 $\mu$ F 16WV   |         |

### 2.4. Resistors

CD SERVO BLOCK [E-8400]

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R102     | ERJ3GEYJ122V | Chip, 1.2k $\Omega$ 1/16W |         |
| R103     | ERJ12YJ270H  | Chip, 27 $\Omega$ 1/2W    |         |
| R104     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R105     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R106     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R107     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R108     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R109     | ERJ3GEYJ684V | Chip, 680k $\Omega$ 1/16W |         |
| R111     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R112     | ERJ3GEYJ272V | Chip, 2.7k $\Omega$ 1/16W |         |
| R113     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R114     | ERJ3GEYJ124V | Chip, 120k $\Omega$ 1/16W |         |
| R115     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R116     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R117     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R118     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R119     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R120     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R121     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R401     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R402     | ERJ3GEYJ471V | Chip, 470 $\Omega$ 1/16W  |         |
| R403     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R404     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R405     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R406     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R407     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R408     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R409     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R410     | ERJ3GEYJ394V | Chip, 390k $\Omega$ 1/16W |         |
| R411     | ERJ3GEYJ104V | Chip, 100k $\Omega$ 1/16W |         |
| R412     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R413     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R414     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R452     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R453     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R456     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R457     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R458     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R459     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R461     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R462     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R463     | ERJ3GEYJ151V | Chip, 150 $\Omega$ 1/16W  |         |
| R464     | ERJ3GEYJ151V | Chip, 150 $\Omega$ 1/16W  |         |
| R465     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R466     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R467     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R468     | ERJ3GEYJ331V | Chip, 330 $\Omega$ 1/16W  |         |
| R901     | ERJ6GEYJ1R5  | Chip, 1.5 $\Omega$ 1/10W  |         |
| R902     | ERJ3GEYJ221V | Chip, 220 $\Omega$ 1/16W  |         |
| R903     | ERJ3GEYJ221V | Chip, 220 $\Omega$ 1/16W  |         |
| R906     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R907     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R951     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R952     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R953     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R954     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R955     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |
| R956     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |
| R957     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |
| R958     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |
| R959     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R960     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R961     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |
| R962     | ERJ3GEYJ562V | Chip, 5.6k $\Omega$ 1/16W |         |

## 2.5. Connectors

### CD SERVO BLOCK [E-8400]

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| CN101    | YEA5220715  | Connector, 15P          |         |
| CN402    | YEA5227114  | Connector, 14P          |         |
| CN901    | YEA5220715  | Connector, 15P          |         |
| CN902    | YEA5220406T | Connector, 6P           |         |
| CN903    | YEA5326102  | Connector, 2P           |         |

## 2.6. Electric Parts

### SWITCHES

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
| SW2      | YEAS09248R | Switch                  |         |
| SW1      | YEAS09308  | Switch                  |         |

### CRYSTAL

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| XL401    | YEXLSTC169T  | Crystal                 |         |
| XL451    | YEXLSTCC419T | Crystal                 |         |

### COIL

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| L101     | YELTLM41P750 | Coil                    |         |

### TERMINAL

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| TP1      | YEATSD00405 | Terminal                |         |

## 2.7. Mechanical Parts

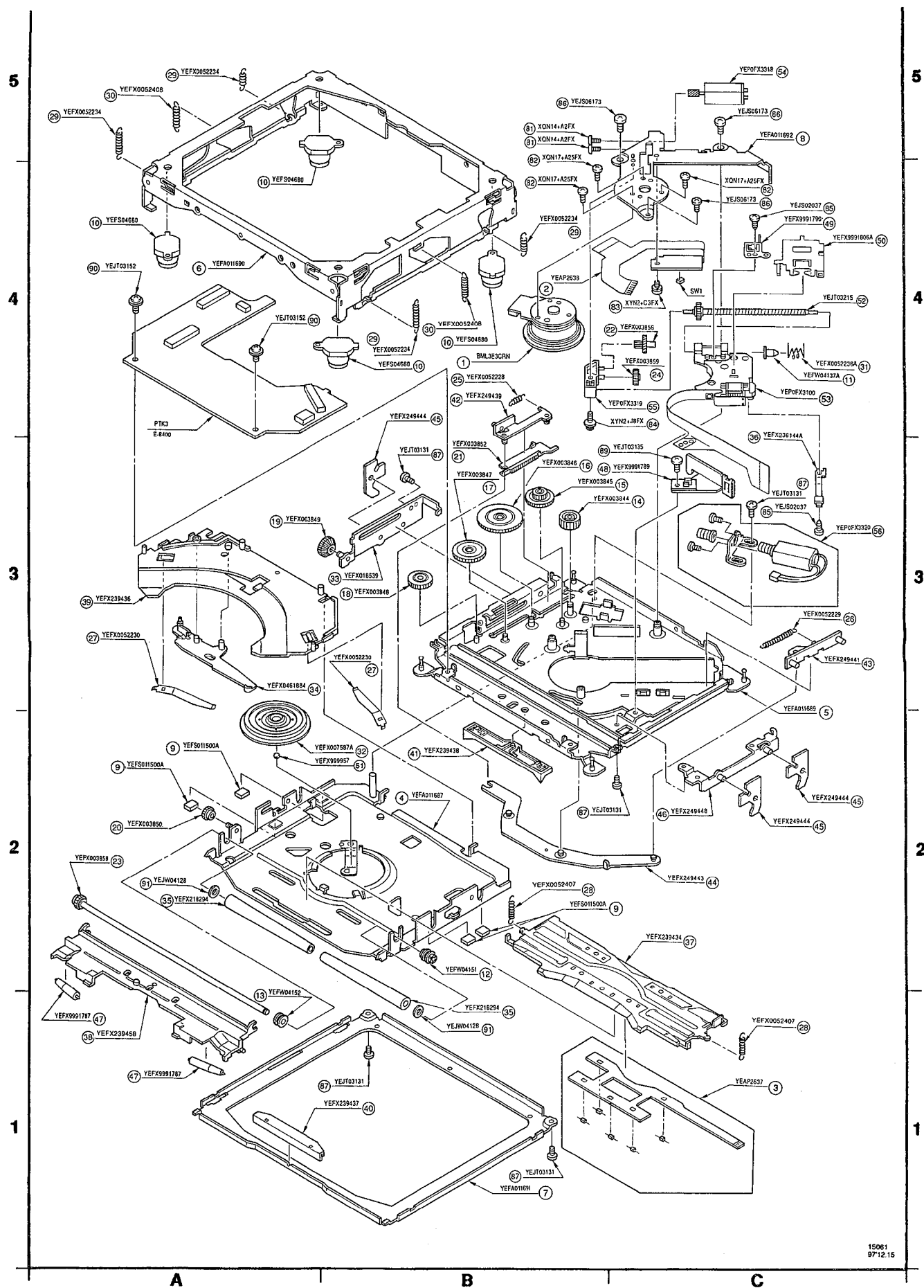
### MISCELLANEOUS

| Ref. No. | Part No.    | Part Name & Description  | Remarks        |
|----------|-------------|--------------------------|----------------|
| 1        | BML3E3CRN   | Spindle Motor            | (4-B)          |
| 2        | YEAP2638    | Suspension FPC           | (4-B)          |
| 3        | YEAP2637    | Disc Guide FPC           | (1-C)          |
| 4        | YEFA011687  | Clamp chassis Ass'y      | (2-B)          |
| 5        | YEFA011689  | Suspension chassis Ass'y | (2-C)          |
| 6        | YEFA011690  | Main chassis             | (4-A)          |
| 7        | YEFA011691  | Upper chassis            | (1-B)          |
| 8        | YEFA011692  | Spindle Plate            | (5-C)          |
| 9        | YEFS011500A | Pad                      | (2-A)<br>(2-C) |

| Ref. No. | Part No.     | Part Name & Description  | Remarks        |
|----------|--------------|--------------------------|----------------|
| 10       | YEFS04680    | Dumper                   | (4-A)<br>(4-B) |
| 11       | YEFW04137A   | Feed Screw Housing       | (4-C)          |
| 12       | YEFW04151    | Roller Shaft Holder (L)  | (2-B)          |
| 13       | YEFW04152    | Roller Shaft Holder (R)  | (1-A)          |
| 14       | YEFX003844   | Clamp Gear (1)           | (3-C)          |
| 15       | YEFX003845   | Clamp Gear (2)           | (3-C)          |
| 16       | YEFX003846   | Clamp Gear (3)           | (3-B)          |
| 17       | YEFX003847   | Loading Gear (4)         | (3-B)          |
| 18       | YEFX003848   | Loading Gear (5)         | (3-B)          |
| 19       | YEFX003849   | Loading Gear (6)         | (3-A)          |
| 20       | YEFX003850   | Loading Gear (7)         | (2-A)          |
| 21       | YEFX003852   | Clamp Rack               | (3-B)          |
| 22       | YEFX003856   | Traverse Gear (2)        | (4-C)          |
| 23       | YEFX003858   | Roller Gear Ass'y        | (2-A)          |
| 24       | YEFX003859   | Traverse Gear (3)        | (4-C)          |
| 25       | YEFX0052228  | Clamp Rack Spring        | (4-B)          |
| 26       | YEFX0052229  | Slide Lever Spring       | (3-C)          |
| 27       | YEFX0052230  | Guide Spring             | (3-A)<br>(3-B) |
| 28       | YEFX0052407  | Guide Spring (F)         | (1-C)<br>(2-B) |
| 29       | YEFX0052234  | Suspension Spring        | (4-B)          |
| 30       | YEFX0052408  | Offset Spring            | (4-B)          |
| 31       | YEFX0052236A | Thrust Adjustment Spring | (4-C)          |
| 32       | YEFX007587A  | Clamper                  | (2-B)          |
| 33       | YEFX018539   | Gear Bracket Ass'y       | (3-B)          |
| 34       | YEFX0461884  | Changeover Lever         | (3-A)          |
| 35       | YEFX218294   | Rubber Roller            | (1-B)<br>(2-A) |
| 36       | YEFX236144A  | Traverse Guide           | (3-C)          |
| 37       | YEFX239434   | Disc Guide (FU)          | (2-C)          |
| 38       | YEFX239458   | Disc Guide (FL)          | (1-A)          |
| 39       | YEFX239436   | Disc Guide (BU)          | (3-A)          |
| 40       | YEFX239437   | Disc Guide (CU)          | (1-B)          |
| 41       | YEFX239438   | Disc Guide (CL)          | (2-B)          |
| 42       | YEFX249439   | Slide Lever (R) Ass'y    | (4-B)          |
| 43       | YEFX249441   | Slide Lever (L) Ass'y    | (3-C)          |
| 44       | YEFX249443   | Connecting Arm Ass'y     | (2-C)          |
| 45       | YEFX249444   | Clamp Cam                | (2-C)<br>(4-B) |
| 46       | YEFX249448   | Cam Holder Plate Ass'y   | (2-C)          |
| 47       | YEFX9991787  | Disc Guide               | (1-A)          |
| 48       | YEFX9991789  | FPC Holder               | (3-B)          |
| 49       | YEFX9991790  | Feed Screw Holder Ass'y  | (4-C)          |
| 50       | YEFX9991806A | Shield Plate             | (4-C)          |
| 51       | YEFX999957   | Steal Ball               | (2-B)          |
| 52       | YEJT03215    | Feed Screw Ass'y         | (4-C)          |
| 53       | YEP0FX3100   | Optical Pickup Ass'y     | (4-C)          |
| 54       | YEP0FX3318   | Traverse Motor Ass'y     | (5-C)          |
| 55       | YEP0FX3319   | Housing Ass'y            | (4-C)          |
| 56       | YEP0FX3320   | Loading Motor Ass'y      | (3-C)          |
| 81       | XQN14+A2FX   | Screw, 1.4mm*2mm         | (5-B)          |
| 82       | XQN17+A25FX  | Screw, 1.7mm*2.5mm       | (4-B)<br>(4-C) |
| 83       | XYN2+C3FX    | Screw, 2mm*3mm           | (4-C)          |
| 84       | XYN2+J8FX    | Screw, 2mm*8mm           | (4-C)          |
| 85       | YEJS02037    | Screw, 1.6mm*4mm         | (3-C)<br>(4-C) |
| 86       | YEJS06173    | Screw, 2mm*3mm           |                |
| 87       | YEJT03131    | Screw, 2.6mm*5mm         |                |
| 89       | YEJT03135    | Screw, 2mm*5mm           | (3-B)          |
| 90       | YEJT03152    | Screw, 2.6mm*4mm         | (4-A)          |
| 91       | YEW04128     | Washer                   | (1-B)<br>(2-A) |

### EXPLODED VIEW (CD PLAYER PARTS)

■Numbers in ○ are indicated REF. No. in the REPLACEMENT PARTS LIST



### 3 MD Player Parts

#### Note:

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by  $\Delta$  mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a load map.

#### 3.1. IC's and Transistors

MD SERVO BLOCK [D96222A/3]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC101    | AN8771NFH    | IC                      |         |
| IC201    | YEAMBDAL717  | IC                      |         |
| IC401    | MN66614R4C1  | IC                      |         |
| IC451    | YEAMHMI740L6 | IC                      |         |
| IC461    | YEAMTC7SLO8F | IC                      |         |
| IC462    | YEAMTC7SLO8F | IC                      |         |
| IC501    | MN101C01DAF  | IC                      |         |
| IC551    | YEAMC3326D3  | IC                      |         |
| IC701    | YEAMBA6891FP | IC                      |         |
| Q101     | 2SB766ATX    | Transistor              |         |

MD SUB BLOCK [E-8714]

| Ref. No. | Part No.  | Part Name & Description | Remarks |
|----------|-----------|-------------------------|---------|
| Q1       | YEANC1623 | Transistor              |         |
| Q2       | YEANC1623 | Transistor              |         |
| Q3       | 2SB1073TX | Transistor              |         |

SW BLOCK [MD1-001-2-01]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| IC801    | YEAMBA6858FP | IC                      |         |

#### 3.2. Diodes

MD SERVO BLOCK [D96222A/3]

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| D401     | MA151ATX     | Diode                   |         |
| D701     | YEADRD33M2T1 | Diode                   |         |

MD SUB BLOCK [E-8714]

| Ref. No. | Part No. | Part Name & Description | Remarks |
|----------|----------|-------------------------|---------|
| D1       | MA151WKT | Diode                   |         |
| D2       | MA165    | Diode                   |         |

#### 3.3. Capacitors

MD SERVO BLOCK [D96222A/3]

| Ref. No. | Part No.     | Part Name & Description     | Remarks |
|----------|--------------|-----------------------------|---------|
| C101     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV  |         |
| C102     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV  |         |
| C103     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV   |         |
| C104     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV  |         |
| C105     | YECUZ1H681JM | Ceramic, 680pF 50WV         |         |
| C106     | YECUZ1H332KX | Ceramic, 3300pF 50WV        |         |
| C107     | YECUZ1H102KX | Ceramic, 1000pF 50WV        |         |
| C108     | YECUZ1H332KX | Ceramic, 3300pF 50WV        |         |
| C109     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV  |         |
| C110     | YECUZ1H102KX | Ceramic, 1000pF 50WV        |         |
| C111     | YECUZ1H272KX | Ceramic, 2700pF 50WV        |         |
| C112     | YECUZ1H102KX | Ceramic, 1000pF 50WV        |         |
| C113     | YECUZ1H102KX | Ceramic, 1000pF 50WV        |         |
| C114     | YECUZ1E223KX | Ceramic, 0.022 $\mu$ F 25WV |         |

| Ref. No. | Part No.     | Part Name & Description        | Remarks |
|----------|--------------|--------------------------------|---------|
| C115     | YECUS1C474KX | Ceramic, 0.47 $\mu$ F 16WV     |         |
| C116     | YECUZ1H472KX | Ceramic, 4700pF 50WV           |         |
| C117     | YECUZ1H472KX | Ceramic, 4700pF 50WV           |         |
| C118     | YECUZ1C823KX | Ceramic, 0.082 $\mu$ F 16WV    |         |
| C119     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C120     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C121     | YECUZ1H332KX | Ceramic, 3300pF 50WV           |         |
| C122     | YECUS1ET106R | Ceramic, 10pF 25WV             |         |
| C125     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C126     | ECEH0JVC470F | Electrolytic, 47 $\mu$ F 6.3WV |         |
| C127     | YECUS1C154KX | Ceramic, 0.15 $\mu$ F 16WV     |         |
| C128     | YECUZ1C333KX | Ceramic, 0.033 $\mu$ F 16WV    |         |
| C129     | YECUS1C474KX | Ceramic, 0.47 $\mu$ F 16WV     |         |
| C130     | YECUZ1C333KX | Ceramic, 0.033 $\mu$ F 16WV    |         |
| C131     | YECUS1C474KX | Ceramic, 0.47 $\mu$ F 16WV     |         |
| C132     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C133     | ECEH0JVC470F | Electrolytic, 47 $\mu$ F 6.3WV |         |
| C134     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C135     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C136     | YECUS1C224KX | Ceramic, 0.22 $\mu$ F 16WV     |         |
| C137     | YECUS1C224KX | Ceramic, 0.22 $\mu$ F 16WV     |         |
| C138     | YECUZ1H332KX | Ceramic, 3300pF 50WV           |         |
| C140     | YECUZ1E223KX | Ceramic, 0.022 $\mu$ F 25WV    |         |
| C144     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C145     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C146     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C201     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C202     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C203     | ECEH1CVC220F | Electrolytic, 22 $\mu$ F 16WV  |         |
| C204     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C205     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C301     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C401     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C402     | YECUZ1H102KX | Ceramic, 1000pF 50WV           |         |
| C403     | YECUZ1H102KX | Ceramic, 1000pF 50WV           |         |
| C404     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C405     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C406     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C407     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C408     | YECUS1C474KX | Ceramic, 0.47 $\mu$ F 16WV     |         |
| C409     | YECUZ1C473KX | Ceramic, 0.047 $\mu$ F 16WV    |         |
| C410     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV     |         |
| C411     | YECUZ1H222KX | Ceramic, 2200pF 50WV           |         |
| C412     | YECUZ1H222KX | Ceramic, 2200pF 50WV           |         |
| C413     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV     |         |
| C414     | YECUZ1C683KX | Ceramic, 0.068 $\mu$ F 16WV    |         |
| C415     | YECUZ1E223KX | Ceramic, 0.022 $\mu$ F 25WV    |         |
| C416     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C417     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C418     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C419     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C422     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C425     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C426     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV     |         |
| C431     | ECEH0JVC470F | Electrolytic, 47 $\mu$ F 6.3WV |         |
| C432     | ECEH0JVC470F | Electrolytic, 47 $\mu$ F 6.3WV |         |
| C461     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C462     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C501     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C502     | ECEH0JVC470F | Electrolytic, 47 $\mu$ F 6.3WV |         |
| C503     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C551     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C552     | YECUS1C106MS | Ceramic, 10pF 16WV             |         |
| C553     | YECUS1A105KX | Ceramic, 1 $\mu$ F 10WV        |         |
| C701     | ECEH1CVC220F | Electrolytic, 22 $\mu$ F 16WV  |         |
| C702     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV      |         |
| C703     | YECUZ1H102KX | Ceramic, 1000pF 50WV           |         |
| C704     | YECUZ1H102KX | Ceramic, 1000pF 50WV           |         |
| C705     | YECUZ1H103KX | Ceramic, 0.01 $\mu$ F 50WV     |         |

SW BLOCK [MD1-001-2-01]

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| C802     | YECUZ1C104KX | Ceramic, 0.1 $\mu$ F 16WV |         |



| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| C803     | YECUZ1C103KX | Ceramic, 0.01pF 16WV    |         |
| C804     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |
| C805     | YECUZ1C104KX | Ceramic, 0.1pF 16WV     |         |

### 3.4. Resistors

MD SERVO BLOCK [D96222A/3]

| Ref. No. | Part No.     | Part Name & Description   | Remarks |
|----------|--------------|---------------------------|---------|
| R101     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R102     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R103     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R104     | ERJ3GEYJ393V | Chip, 39k $\Omega$ 1/16W  |         |
| R105     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R106     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R107     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R108     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R109     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R110     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R111     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R112     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R113     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R114     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R117     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R118     | ERJ14YJ4R7H  | Chip, 4.7 $\Omega$ 1/16W  |         |
| R119     | ERJ3GEYJ474V | Chip, 470k $\Omega$ 1/16W |         |
| R120     | ERJ3GEYJ471V | Chip, 470 $\Omega$ 1/16W  |         |
| R122     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R133     | ERJ3GEYJ472V | Chip, 4.7k $\Omega$ 1/16W |         |
| R134     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R135     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R202     | ERJ3GEYJ2R2V | Chip, 2.2 $\Omega$ 1/16W  |         |
| R401     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R402     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R403     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R404     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R407     | ERJ3GEYJ391V | Chip, 390 $\Omega$ 1/16W  |         |
| R408     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R409     | ERJ3GEYJ391V | Chip, 390 $\Omega$ 1/16W  |         |
| R411     | ERJ3GEYJ471V | Chip, 470 $\Omega$ 1/16W  |         |
| R412     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R413     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R414     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R415     | ERJ3GEYJ473V | Chip, 47k $\Omega$ 1/16W  |         |
| R416     | ERJ3GEYJ222V | Chip, 2.2k $\Omega$ 1/16W |         |
| R417     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R418     | ERJ3GEYJ122V | Chip, 1.2k $\Omega$ 1/16W |         |
| R419     | ERJ3GEYJ471V | Chip, 470 $\Omega$ 1/16W  |         |
| R420     | ERJ3GEYJ182V | Chip, 1.8k $\Omega$ 1/16W |         |
| R421     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R422     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R425     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R426     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R427     | ERJ3GEYJ392V | Chip, 3.9k $\Omega$ 1/16W |         |
| R429     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W  |         |
| R432     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R433     | ERJ3GEYJ333V | Chip, 33k $\Omega$ 1/16W  |         |
| R501     | ERJ3GEYJ563V | Chip, 56k $\Omega$ 1/16W  |         |
| R502     | ERJ3GEYJ564V | Chip, 560k $\Omega$ 1/16W |         |
| R511     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R513     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R515     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R517     | ERJ3GEYJ332V | Chip, 3.3k $\Omega$ 1/16W |         |
| R533     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W  |         |
| R551     | ERJ3GEYJ334V | Chip, 330k $\Omega$ 1/16W |         |
| R701     | ERJ3GEYJ273V | Chip, 27k $\Omega$ 1/16W  |         |
| R702     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R703     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R704     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R705     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |
| R706     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W   |         |
| R708     | ERJ3GEYJ223V | Chip, 22k $\Omega$ 1/16W  |         |
| R709     | ERJ3GEYJ153V | Chip, 15k $\Omega$ 1/16W  |         |

| Ref. No. | Part No.     | Part Name & Description  | Remarks |
|----------|--------------|--------------------------|---------|
| R711     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W |         |
| R712     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W |         |
| R713     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W |         |
| R714     | ERJ3GEYJ391V | Chip, 390 $\Omega$ 1/16W |         |
| R720     | ERJ3GEYJ683V | Chip, 68k $\Omega$ 1/16W |         |
| R730     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W |         |

MD SUB BLOCK [E-8714]

| Ref. No. | Part No.    | Part Name & Description   | Remarks |
|----------|-------------|---------------------------|---------|
| R1       | ERJ14YJ221H | Chip, 220 $\Omega$ 1/4W   |         |
| R2       | ERJ6GEYJ472 | Chip, 4.7k $\Omega$ 1/16W |         |
| R3       | ERJ6GEYJ334 | Chip, 330k $\Omega$ 1/16W |         |
| R4       | ERJ6GEYJ103 | Chip, 10k $\Omega$ 1/16W  |         |
| R5       | ERJ6GEYJ104 | Chip, 100k $\Omega$ 1/16W |         |

SW BLOCK [MD1-001-2-01]

| Ref. No. | Part No.     | Part Name & Description  | Remarks |
|----------|--------------|--------------------------|---------|
| R801     | ERJ3GEYJ102V | Chip, 1k $\Omega$ 1/16W  |         |
| R802     | ERJ3GEYJ103V | Chip, 10k $\Omega$ 1/16W |         |
| R803     | ERJ3GEYJ1R5V | Chip, 1.5 $\Omega$ 1/16W |         |
| R804     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W |         |
| R805     | ERJ3GEYJ101V | Chip, 100 $\Omega$ 1/16W |         |

### 3.5. Connectors

MD SERVO BLOCK [D96222A/3]

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| CN1      | YEA0114TKCR | Connector, 14P          |         |
| CN101    | YEA05243521 | Connector, 21P          |         |
| CN901    | YEA05274614 | Connector, 14P          |         |
| CN902    | YEA05326104 | Connector, 4P           |         |

SW BLOCK [MD1-001-2-01]

| Ref. No. | Part No.    | Part Name & Description | Remarks |
|----------|-------------|-------------------------|---------|
| CN801    | YEA05243612 | Connector, 12P          |         |
| CN802    | YEA05274611 | connector, 11P          |         |

### 3.6. Electric Parts

SWITCHES

| Ref. No. | Part No.  | Part Name & Description | Remarks |
|----------|-----------|-------------------------|---------|
| SW1      | YEAS09314 | Switch                  |         |
| SW2      | YEAS09314 | Switch                  |         |
| SW3      | YEAS09314 | Switch                  |         |
| SW4      | YEAS09308 | Switch                  |         |

CRYSTALS

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| XL401    | YEXLSTCV169T | Crystal                 |         |
| XL501    | YEXLSTCC737T | Crystal                 |         |

VARIABLE RESISTOR

| Ref. No. | Part No.     | Part Name & Description | Remarks |
|----------|--------------|-------------------------|---------|
| VR101    | YEVNPOZ3A104 | Variable Resistor       |         |

COILS

| Ref. No. | Part No.   | Part Name & Description | Remarks |
|----------|------------|-------------------------|---------|
| L552     | EXCCET103U | Coil                    |         |
| L553     | EXCCET103U | Coil                    |         |

### 3.7. Mechanical Parts

MISCELLANEOUS

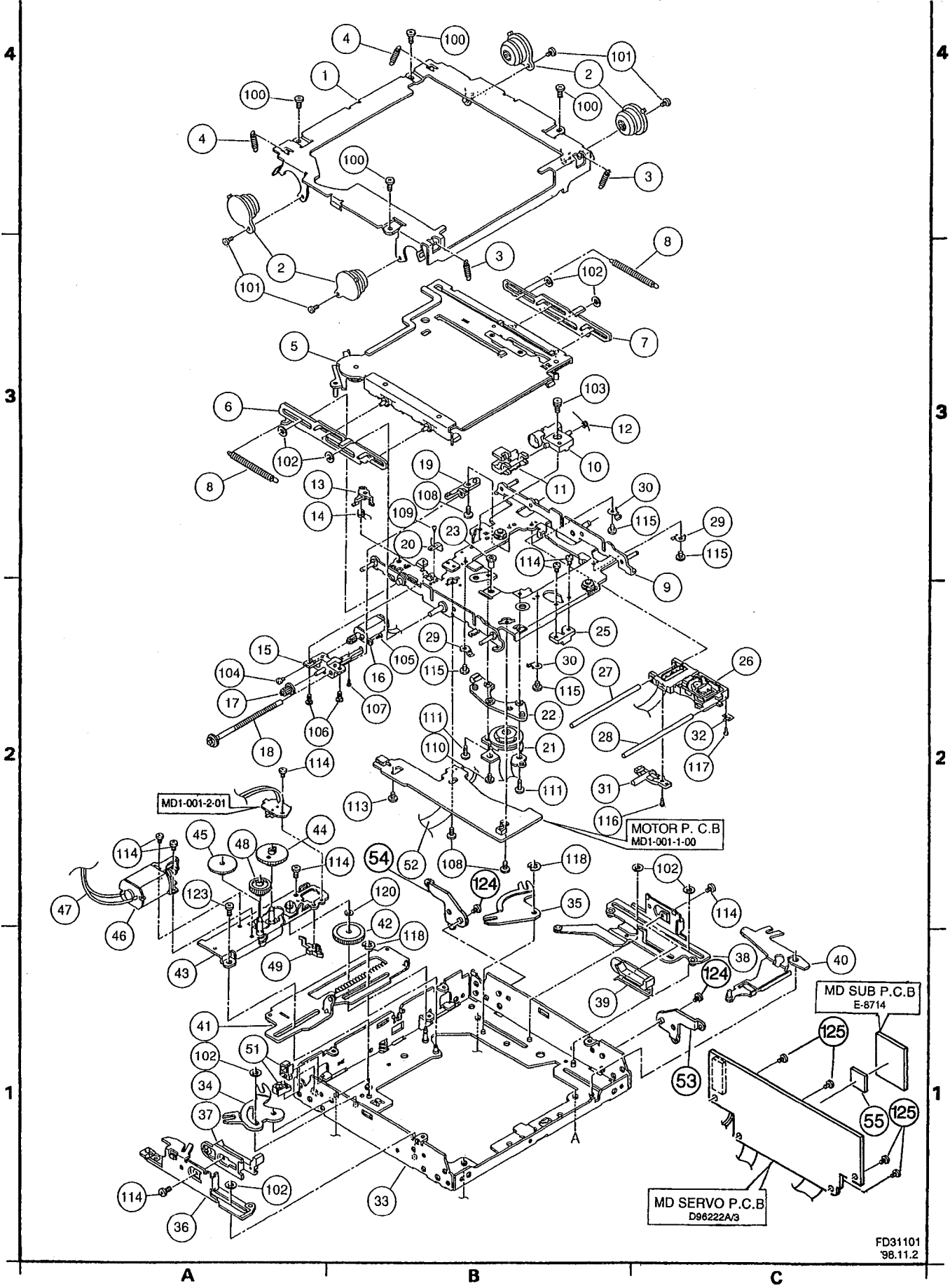
| Ref. No. | Part No.    | Part Name & Description | Remarks        |
|----------|-------------|-------------------------|----------------|
| TP1      | YEATSD00405 | Terminal                |                |
| 1        | YESFA03049  | Upper Chassis           | (4-B)          |
| 2        | YESFS04012  | Dumper                  | (3-A)<br>(4-B) |

| Ref. No. | Part No.    | Part Name & Description            | Remarks        |
|----------|-------------|------------------------------------|----------------|
| 3        | YESFX005107 | Float Spring A                     | (3-B)<br>(4-C) |
| 4        | YESFX005108 | Float Spring B                     | (4-A)<br>(4-B) |
| 5        | YESFX239011 | Cartridge Holder Ass'y             | (3-A)          |
| 6        | YESFX046097 | Slide Cam Plate L                  | (3-A)          |
| 7        | YESFX046098 | Slide Cam Plate R                  | (3-C)          |
| 8        | YESFX005109 | Slide Cam Spring                   | (3-A)<br>(3-C) |
| 9        | YESFA01058  | Suspension Chassis Ass'y           | (2-C)          |
| 10       | YESFX046099 | Suspension Lock B                  | (3-B)          |
| 11       | YESFX046110 | Actuator B                         | (3-B)          |
| 12       | YESFX005110 | Lock Spring B                      | (3-B)          |
| 13       | YESFX046111 | SW Actuator                        | (3-B)          |
| 14       | YESFX005111 | SW Actuator Spring                 | (3-B)          |
| 15       | YESFX021107 | Motor Bracket A                    | (2-A)          |
| 16       | YESAK01020  | Motor Ass'y                        | (2-B)          |
| 17       | YESFX003069 | Motor Gear B                       | (2-A)          |
| 18       | YESFX999038 | Feed Screw Ass'y                   | (2-A)          |
| 19       | YESFX021108 | Motor Bracket C                    | (3-B)          |
| 20       | YESFX005112 | Leaf Spring                        | (3-B)          |
| 21       | BQL2A1CRH   | Spindle Motor                      | (2-B)          |
| 22       | YESFX046100 | Spindle Motor Holder               | (2-B)          |
| 23       | YESFW01025  | Spindle Motor Mounting Bracket     | (3-B)          |
| 25       | YESFX046101 | Lock Cam F                         | (2-B)          |
| 26       | KLR1000J    | Optical Pickup Ass'y               | (2-C)          |
| 27       | YESFW01026  | Guide Shaft                        | (2-B)          |
| 28       | YESFW01027  | Sub Guide Shaft                    | (2-B)          |
| 29       | YESFX005113 | Shaft Holder R                     | (2-B)<br>(3-C) |
| 30       | YESFX005114 | Shaft Holder L                     | (2-B)<br>(3-C) |
| 31       | YESFX046102 | Feed Screw Housing Ass'y           | (2-B)          |
| 32       | YESFX005115 | Guide Shaft Spring                 | (2-C)          |
| 33       | YESFA01057  | Main Chassis Ass'y                 | (1-B)          |
| 34       | YESFX046103 | Rink Plate L                       | (1-A)          |
| 35       | YESFX046104 | Rink Plate R                       | (2-B)          |
| 36       | YESFX046105 | Suspension Guide L Ass'y           | (1-A)          |
| 37       | YESFX046106 | Suspension Guide L                 | (1-A)          |
| 38       | YESFX046112 | Suspension Guide R Ass'y           | (1-C)          |
| 39       | YESFX046107 | Suspension Guide R                 | (1-B)          |
| 40       | YESFX046108 | Lock Plate F Ass'y                 | (1-C)          |
| 41       | YESFX046109 | Rack Plate Ass'y                   | (1-A)          |
| 42       | YESFX003070 | Gear E                             | (2-B)          |
| 43       | YESFX018005 | Gear Mounting Bracket Ass'y        | (1-A)          |
| 44       | YESFX003071 | Gear D                             | (2-A)          |
| 45       | YESFX003072 | Gear C                             | (2-A)          |
| 46       | YESAK01021  | Loading Motor Ass'y                | (1-A)          |
| 47       | YESAJ02006  | Motor Extension Cord               | (2-A)          |
| 48       | YESFX003073 | Gear B                             | (2-A)          |
| 49       | YESFX046113 | SW Actuator E                      | (1-A)          |
| 51       | YESFR01018  | Clamper C                          | (1-A)          |
| 52       | YESAP176    | Motor FPC                          | (2-B)          |
| 53       | YESFX021109 | P. Bracket F                       | (1-C)          |
| 54       | YESFX021110 | P. Bracket B                       | (2-B)          |
| 55       | YEF011544   | PCB Mounting Pad                   | (1-C)          |
| 100      | YESJS01118  | Screw, 2.6mm*3mm                   | (4-A)<br>(4-B) |
| 101      | YESJS01119  | Screw, 2mm*3.5mm                   | (3-A)<br>(4-B) |
| 102      | YESJE01014  | Retaining Ring,<br>2.1mm*5mm*0.4mm |                |
| 103      | YESJS01120  | Screw, 2.6mm*3.5mm                 | (3-B)          |
| 104      | YESJS01121  | Screw, 1.2mm*3mm                   | (2-A)          |
| 105      | YESJT03054  | Screw, 1.2mm*2mm                   | (2-B)          |
| 106      | YESJS01122  | Screw, 1.4mm*2.5mm                 | (2-A)          |
| 107      | YESJS01123  | Screw, 1.2mm*3mm                   | (2-B)          |
| 108      | YESJS01124  | Screw, 2mm*3mm                     | (2-B)<br>(3-B) |
| 109      | YESJS01125  | Screw, 1.4mm*1.5mm                 | (3-B)          |
| 110      | YESJS01126  | Screw, 1.7mm*3mm                   | (2-B)          |
| 111      | YESJS01127  | Screw, 1.7mm*5.5mm                 | (2-B)          |
| 113      | YESJS01128  | Screw, 1.7mm*2.5mm                 | (2-B)          |
| 114      | YESJT03055  | Screw, 2mm*3mm                     | (2-B)          |

| Ref. No. | Part No.   | Part Name & Description | Remarks        |
|----------|------------|-------------------------|----------------|
| 115      | YESJS01129 | Screw, 2mm*2mm          | (2-B)<br>(3-C) |
| 116      | YESJS01130 | Screw, 1.4mm*3mm        | (3-D)          |
| 117      | YESJS01131 | Screw, 1.2mm*1.5mm      | (2-C)          |
| 118      | YESJE01027 | E-Ring, 2mm             | (2-B)          |
| 120      | YESJW01035 | Washer, 1.65mm          | (2-B)          |
| 123      | YESJS01132 | Screw, 2mm*2.2mm        | (2-A)          |
| 124      | YESJT03059 | Camera Screw, 2.6mm*3mm | (1-C)<br>(2-B) |
| 125      | YESJT03117 | Screw, 2mm*4mm          | (1-C)          |

EXPLODED VIEW (MD PLAYER PARTS)

Numbers in ○ are indicated REF. No. in the REPLACEMENT PARTS LIST



FD31101  
98.11.2